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A
R E L A T I O N
O F A
Journey to the Glaciers
I N T H E
D U T C H Y O F S A V O Y.

Translated from the FRENCH of
M. T. B O U R R I T,

Precentor of the Cathedral Church at GENEVA.

By C H A. and F R E D. D A V Y.

Exemplum statuere in *his*, ut adolescentuli
Vobis placere studeant potius quam sibi.

T H E T H I R D E D I T I O N.

D U B L I N:

Printed for R. CROSS, D. CHAMBERLAINE,
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L. WHITE, J. BEATTY,
and C. TALBOT.

M,DC C,LXXVI.

1.

TO THE HONOURABLE

Mrs. *RICHARD WALPOLE*,

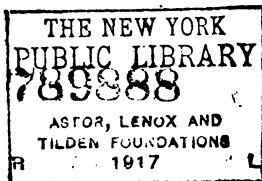
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IN GRATEFUL ACKNOWLEDGMENT

OF THE MANY FAVOURS

CONFERED UPON

THE TRANSLATORS.



THE EDITOR'S P R E F A C E.

THERE is not any thing which can be offered to the Public, however clear or proper in the judgment of the writer, but still is liable to be opposed either from prejudices or mistake. One would scarcely think it possible, the character of *Picturesque*, prefixed to the relation of a journey through the most romantic country in the world perhaps, could ever have been reckoned an objection to it: but thus it happened, and this addition to the Title of Monsieur *Bourrit's* Narrative, as it was distributed amongst the Friends of the Translators, prevented the success of many applications from them in its favour. It gave room, it seems, for a presumption,

a

sumption, that it was a mere descriptive Trifle, which though it might delight and entertain the *Fancy*, could not merit the attention of a man of sense; as if it were indubitably certain, that what is recommended to the *Taste* must *therefore* be unworthy of the *Judgment*. Let us try for an apology.

It may be observed then, that as *Truth* is naturally the object of the *Judgment*, so *Elegance* or *Beauty* is naturally the object of our *Taste* *: and that these two *distinct* powers by which we are enabled to disco-

* No term was ever more happily applied by *metaphor*, than *Taste*, to the perception and enjoyment of *Elegance* or *Beauty*, which admits of several modifications, and so dependant upon custom and habit, though its principles are founded in our constitution: whereas the Mind determines absolutely, without any modes or difference upon *Truth*; and all men who discern it judge of its existence, without the least variety in their idea: of two things which are both elegant, we can fre

ver and to relish Truth and Beauty, have their existence originally together in the same mind. If this be founded upon fact, it follows, that in *general*, 'tis owing to a *partial Education*, where we find them separated; and that it is a *faulty* one, is clear too, since undoubtedly the most ac-

a 2 com-

frequently distinguish one to be more so than the other, but all *Truths* are such equally, and all men equal in their perception of them. The power of discerning *Truth* belongs to us as *Men*, since it is not only the prerogative, but the *foundation* of our rational nature, and the most unlettered peasant who discerns a truth, knows it full as well, considered singly, as a *Bacon* or an *Aristotle*.

Indubitable certainty, whether it arises from *Analogy* or *Testimony*, hath by some indeed been looked upon as an inferior species of *Truth*; in many cases it *must* influence and regulate our conduct, as it necessarily fixes our opinions; but though it answers thus the *purposes of Truth*, it never rises higher than *probable*, and sometimes gradates downward, till it reach the very line that terminates the boundary of what is barely *possible*.

accomplished man, is he who carries every
 native Principle the nearest to perfection.
 To this unequal cultivation of our mental
 powers, it is to be attributed, that men
 of *Taste* are apt to look upon the search of
Truth, as damping all the fire of Genius:
 whilst those of deeper thinking, are dis-
 posed to treat the cultivation of our *Taste*,
 as the pursuit of Folly: both are surely
 in an error; since, if there be no objec-
 tion from the *nature* of the human mind,
 the love of *Truth* and *Beauty* might be
 jointly cherished; and as one or other is
 neglected, it is not uncommon to observe
 the man of rigid *Truth*, with all the merit
 of scholastic Erudition, incapable of re-
 commending it to the affections; or on
 the contrary, the man of *Taste* alone, with-
 out the power of investigating and deduc-
 ing *real Truths*, perplexed with their *resem-
 blances*, and who can relish none, but such
 as are addressed to his *Imagination* only.
 Books of abstract reasoning, are the aver-
 sion of the one, and Books of entertain-
 ment

ment of the other. Thus writing has been separated into two distinct classes, the *scientific*, and *diverting*; and it would be well if this were all; dislike to different compositions, unhappily expands upon the Authors of them: it seldom stops at censuring the works themselves, but leads in time to personal aversion and contempt: whereas in fact that strong desire which urges on the philosophic mind, and carries it from *Truth* to *Truth*, as it is owing to the same principle, which carries others forward still in search of *Beauty*, when properly considered, shows the error of neglecting either.

HAD a passion for *Variety*, which strongly operates in every mind, and seems to be *one* general *final* cause at least of Beauty, not been universally implanted in our Nature, men would have sat down upon their first attainment, be what it would, and fixed in admiration of a single truth, or else incapable of taking their attention

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off, from what they first surveyed of *elegant*, our *first* pursuit would probably have been our *last**; instead of that progression
in

* The pleasure which arises from a sight of what is elegant or beautiful fixing our attention, it hath often been observed that Beauty as *apparently* existing in the object, was appointed chiefly for an indicative signal of its merit, or at least as an inducement for us to acquire a knowledge of whatever carries this distinguished token; to this it may be added (since knowledge ought not to be limited to what is beautiful in Nature) that the number or the opposition of their *parts*, or somewhat striking in the *colouring*, takes place with other objects, where such delicate constructions and gradations of them may be wanted, as constitute the mediate or mechanic causes of *material Beauty*; whilst *Novelty alone* solicits and attracts our notice with such as are defective in the charms of *Multiformity* or *Elegance*: yet still however strange it may at first appear, the *progress* of our knowledge seems to be directly owing to what approaches nearer to *Dislike* than *Pleasure*, to something more than an *indifference* for *sameness*, which arises from the continued survey of those very objects, that were originally highly pleasing, and which lays the *necessary deep Foundation* of

P R E F A C E. xi

in the *Sciences*, and of that improvement
in the *Arts* we now behold, instead of all
a 4 those

our passion for *Variety*; but this *tedium*, *ennui*, *dis-
taste*, or whatever else it may be called, comes on,
when once we have considered any object as a *whole*,
examined the connection and the structure of its sever-
al parts, and discovered after what manner they op-
erate to produce a *unity*, of effect, or to answer *all*
the purposes for which they were intended. So long
as we are capable of going forward in this search, a
single object has sufficient beauty to detain the eye, by
giving an employment to the *Understanding*; but no
sooner have we acquired such a knowledge of it, than
its attractive power begins gradually to grow weaker,
till it acts no longer. The object that before solicited
and drew us to it, now repels us for a time: the mind
attentive only to the *knowledge* it has gained, which
acts in turn with all the present force of novelty upon
it, and trusting to the power of calling back those plea-
sures it enjoyed in the pursuit, attaches itself soon to
other objects, though far inferior perhaps in point of
elegance, to what it turns away from. Such is the
providential appointment of causes and effects, that
those things which were made to please us by the beau-
ty of their forming or colouring, are limited in the

con-

those blessings we enjoy from cultivated
life and manners, the business of the world
must

continuance of their influence; though naturally pleasing, they can please no *longer* than would be consistent with the complicated end of Man's creation, *The production of all possible happiness, so far as it is suitable to his condition, in conjunction with all possible knowledge and virtue:* The happiness of sensual creatures might have been procured, without the attainment of the *one*, or the practice of the *other*, but as it is reasonable to believe that God intended the delights of sensual and at the same time *rational* beings, should by natural effect conduce to *higher* purposes, accordingly we find that Beauty of appearance which gives to the *inanimated* parts of the creation their *connection* with us, and endears them by the pleasure they afford, still leads to the advancement of our knowledge, by that pleasure's passing through indifference to weariness, and forcing our attention out to other objects. Whilst the beauties of *the world of life in general*, besides the furtherance of *knowledge*, cherish all those sympathetic feelings, which correct the selfish Passions, and extend our Kindness and Affection beyond the limit of our own Species.

Some

must have stood still, and men at best, if it be possible they could subsist in such a state, would have resembled only different groups of Statues. The writer therefore who is actuated by the love of *Beauty*, and the Writer who is actuated by the love of *Truth*, being originally put in motion by the very same spring, naturally operate to the same end, a completion of the general designs of Providence for the happiness of the world. Should their labours not appear of *equal* merit; yet both are certainly deserving praise; but that conduct of our education must be wrong, which separates those Powers, that might have been a ballance

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to

Some advantage or improvement was designed to be the attendant, or to the consequence of every pleasure, and our finest and most lively feelings, become dull and languid, as all our *Passions* die away, when their influence and impulse are no longer useful. How sweetly are we held in Life by such attachments as unite our interest with our pleasures! and how friendly is the disengagement from them, to a preparation for our passing out of this World, without regretting what we leave behind us in it!

to each other, and have acted jointly with a double force. In all the works of Nature, usefulness and beauty are united; let us copy then her manner; to stop at mere amusement, seems a waste of time, which certainly might be employed to the very same purpose with additional advantages; and not to engage the *Graces* in the ornamenting *Truth* is in fact to offer her to insults. Some works of elegance *alone* indeed, and those of the descriptive kind, particularly, have their use at present, under many disadvantages, as they tend to the suggestion of ideas which are not immediately impressed. The marks of infinite Beneficence and Power, are stamped in every corner of the Universe, and men may infer the Wisdom likewise of the Cause from the *symmetry* and *Beauty*, as well as from the *usefulness* and *regularity* of the effects. It is impossible, one would think, to look upon the world diversified with so much *elegance* in all its *lesser* parts, and ennobled with such *grandeur* and *subli-*

mity in the *larger*, (where even its seeming blemishes contribute both to perfect and enrich the whole,) without the highest pleasure. There *are* Eyes it is true, which look without seeing, as there are Ears that hear not; but this is not the fault of Him who formed them: the *general* effect of a survey of Nature is Delight; whilst every species of Landscape, like every different species of * Melody, excites its own peculiar genuine emotions; nor are they limited to the imagination only, they make their passage through it to the Heart, and lead to acts of Gratitude and Adoration; • these are more than Trifles. An ideal

* The several species of *Melody*, have never yet been accurately determined; whereas those of *Landscape* are found to be no more than sixteen, from whose different combinations, with the addition of accessory circumstances, all the varieties of Landscape are derived; but it is not meant to be affirmed of Landscape as of Melody, that it is capable of exciting only an Emotion. The World may shortly be favoured with a Treatise upon the Principles and Effects of Landscape, by a very ingenious Artist, Mr. Alexander Cozens.

ideal presence raised by just description, must have similar effects with ^{the} objects, whether grand or beautiful: the dullest finds his mind exalted by the contemplation of *Sublimity* and *Vastness*, and the giddy feels his spirits calmed for temperate enjoyments by that of *elegant simplicity*; it hath been observed that many of the greater evils of life, those which affect the peace and happiness of Societies and States, arise sometimes from private self-dissatisfaction, and he who renders a man more easy with himself, renders him so to all Mankind. *Pastoral* writing, whose great merit consists in the descriptive pictures it exhibits of the quiet scenes of rural Nature, induces a serenity of Pleasure, and inspires tranquility of sentiment, beyond any other composition of Poetry, for this reason probably it is admired in common more than either *Tragedy* or *Epic*. A similar observation might be made upon some publications we have lately seen of the epistolary sort, in which the Authors

give

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give not only a general sketch of the countries they pass through, they place us as it were upon the very spot which they describe, and we conceive ourselves belonging to the party, whilst the absence of fatigue or danger, leaves the mind at liberty to form and to pursue its own reflections.

It is but justice to Monsieur *Bourrit*, to observe, the following narrative affords us ample proofs of a distinguishing imagination; his journey to the *Glaciers*, gives a truly picturesque description of such scenes, as must have been particularly striking to the cultivated Taste of a Painter; little more indeed is added, than suffices to connect them; and it may be wished he had explained himself with more precision, in accounting for those waves of ice, which have such singular appearances; a point in which he leaves the mind not fully satisfied.

WITH

WITH regard to the Translation, it is offered as a first attempt: no precaution has been wanting to render it correct: the Translators have endeavoured to give it the air of an original, so far as their abilities permitted, and it was consistent with the faithfulness of a Translation; and the Editor presumes they have avoided no unusual fault, the introducing foreign idioms, which tend directly to destroy the character of every Language.

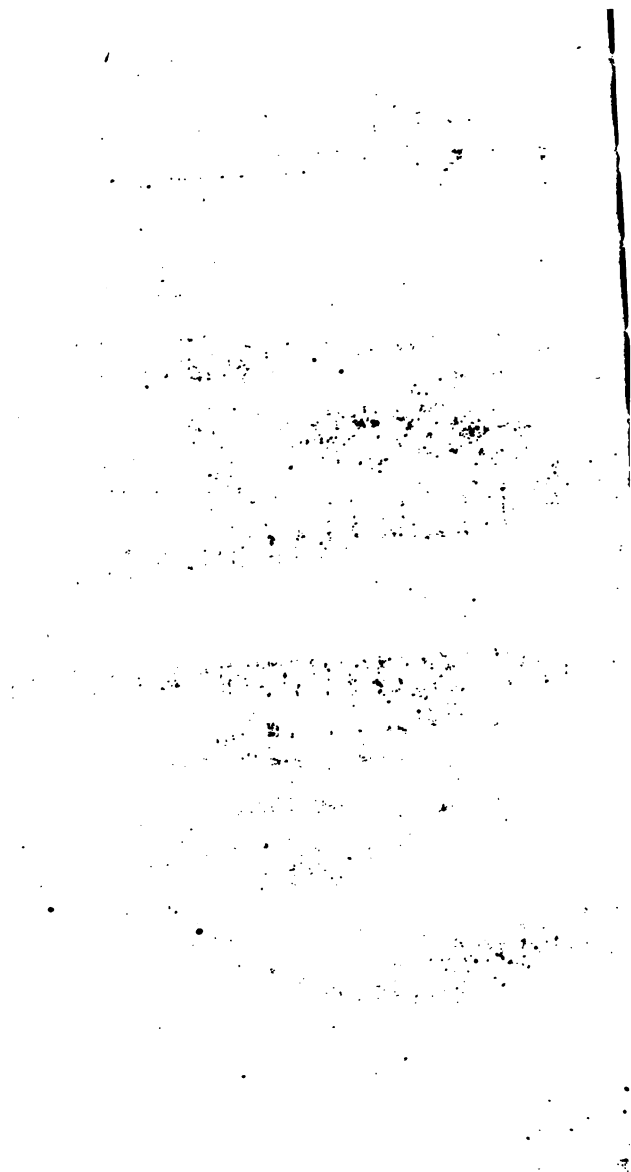
BUT after all, it is with writing as with Life; on looking over what is finished, it is easy to discover errors, that escaped even a close examination, and to see that many passages might have been altered for the better when it is too late; ingenuous acknowledgments is all that can be offered for these oversights of the Translators, and they trust them to the candour of
those

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those Friends, whose favour has so amply
been experienced in the encouragement of
their undertaking.

HENSTED, SUFFOLK.

Dec. 26, 1774.



Author's Advertisement.

THE Author thinks proper to acquaint the Public, that he had no intention of promoting the sale of his Plates by the following Narrative; but that its publication was requested of him, as affording hints that might be useful; however, as the Views intended to be engraved were the principal object of his plan, he thought himself obliged to say something of *them*, before he entered upon the Relation of his Journey. He accordingly observes, that the first time he went into this romantic country, the number, and immensity of the objects which struck his sight, at the same time presented difficulties it was impossible for him then to surmount, not having formed the least idea of them before he set
out.

THE AUTHOR'S

out: his second attempt was more successful; when he not only determined his choice of the *Prospects*, but was enabled to invent a new method of taking them with greater exactness.

HIS end thus answered, he brought back fourteen sketches, which those who are pleased with these subjects, as well Foreigners as Natives, have judged worthy the attention of the Curious.

HE takes upon him to assure the Public, that not only the *larger* Masses are designed in these Views, but that he has made out even the *smaller*; and that nothing is added from imagination only; as in almost * all the Drawings of these places he has had an opportunity of seeing. That he had examined the Print from a
Plate

* The author has excepted from this confure two Views of *Chamouni*, , drawn with great care and exactness by Mr. *Jalabert*.

ADVERTISEMENT.

Plate of Mr. *Vivaré* in *London*, representing the icy valley of *Montanvert*, of which he affirms there is hardly so much as one stroke taken from Nature; and that another of the valley of *Chamouni* is equally false; (he means the thirteenth Plate in the account of the *Glaciers* of *Switzerland*, by Mr. *Grouner*) all which will not appear extraordinary, when we are informed that those gentlemen, who had hitherto gone over the *Glaciers**, were rather men of *Taste* than of *Draughtsmen*. He has experienced besides, that one journey is insufficient to render drawings of this sort perfect. That he found it highly necessary to attend to the peculiar state and condition of the air and weather, of which we never can be secure, and which may prove very unfavourable to the Designer, upon a single visit, or in one season only; though the completion

* *Glaciers* are beds of ice accumulated upon the declivities between mountains.

THE AUTHOR'S

pletion of his sketches must depend upon their clearness and serenity. We go to the valleys—are struck with admiration—trace out some loose lines in haste—add a few revising touches by way of memorandums, and at our return *Imagination* does the rest.

HE makes no scruple to say, that it is after this manner most of the Views which accompany the description of the *Glaciers of Switzerland* have been executed, and that of the Seventeen Plates which adorn this work, there are only three to be relied on for their exactness; though he acknowledges at the same time, they are engraved with *Taste*.

WITH respect to the species of engraving for his own Drawings, he gives the preference to *etchings*, (if they may be called Engravings) as more in the stile of a Painter; and he apprehends the biting-in *Aqua fortis* will have a freer effect in these subjects.

ADVERTISEMENT

subjects than the strokes of the graver. He adds another reason for the preference of *etchings* in this instance, which had more weight with him perhaps than the former; namely, that the etchings could be finished by himself. A love of truth and exactness seems to operate very powerfully with our Author, and these could not precisely be attended to by a person who had not at least been present at the taking his *Designs*: the engravings might have had an *elegance* and *force*, but a *real* Connoisseur, as he very justly observes, will in this case give the preference to a Plate of *inferior* merit, in which he can depend upon the Faithfulness of the Representation.

A TABLE

A

TABLE of the DRAWINGS

Which were originally intended to have
been published by Monf. BOURRIT*.

GENERAL Chart.

*First View of Mount Blanc, from the Environs
of Geneva.*

View of the Valley of Cluse.

View of the Entrance or Straits of Cluse,

*View of the little Lake above the Goat's
Bridge.*

*View of the Fall of the River Arve, near the
Goat's Bridge.*

*View of the Walls of Ice at the Glacier of
Bossons.*

*View of the valley of Chamouni, from the
Height of the same Glacier.*

Appearance

* We have been informed that Monf. Bourrit has
given up the thought of etching his Designs, and that
they are now in the possession of a Gentleman in
England.

TABLE OF THE DRAWINGS.

Appearance of the Glacier des Pelerins.

*View particularly interesting to a Genevois,
taken near the Summit of one of the Needles.*

View of the valley of Ice from Montanvert.

*Appearance of the Glaciers behind Mount
Blanc.*

*Appearance of the level valley of Ice at the
Glacier of Telefre.*

*View of an Avalanche, or Fall of Snow, at
the Glacier des Bois, from the Side of
Montanvert.*

*Profile of the Mass of Ice at the Source of the
Arveron.*

*View of the same Mass, and of the Dome of
Ice.*

*View of the same Mass as it was again covered
over.*

*View of the Chain of the Needles from the
Height of Breven.*

View of the Glacier of Tour.

View of the Cascade in the Valorfine.

*Appearance of the Country of Vallais, from
the Heights of Triente.*

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The A U T H O R ' s

Preliminary Discourse.

THE Relation here published, is the fruit of three journeys into the Dutchy of Savoy. To obtain a just idea of a country situated in the very heart of the Alps, will I presume, be allowed a much more difficult undertaking, than to acquire the knowledge of almost any other. A single visit to most places, is in general sufficient to answer every purpose; and especially to such as having been already many times described, the later traveller has it

ii THE AUTHOR'S

in his power to compare the separate remarks of others who have gone before him, and to blend them, if he pleases, in a new narration with his own. All this is easy, and familiar; whereas an attempt to visit and describe a country little known, and almost wholly separated from others, without archives, or memorials, (not to mention the fatigues and hazards of the journey,) has a claim upon the candour of the Public.

I conceived, nevertheless, that I ought not from a presumption of this indulgence, to hasten the impression of my essays, till they were in some degree correct. Four years have passed between my first journey and my last; my papers in the mean time have been shown to every person who was desirous of perusing them; and it was not till September last*, that I declared by an advertisement
my

PRELIMINARY DISCOURSE. iii

my determination for printing them. But the work designed for publication, was it seems delay'd too long; a reason which perhaps determined one of my countrymen to be beforehand with his *Voyage Pittoresque aux Glaciers*: He undertook this journey furnish'd with my Narrative, and he compleated it in six or seven days: yet although he tells us, that *he set out with a fixed resolution to go over the Glaciers*, he really has seen no more of them than one; which to say the truth, he seems barely to have seen; and he has not even so much as attempted to give a look at the rest; convinced, he says, that a walk of many leagues would afford him but a repetition of the very same objects, which had already made their full impression. A new and easy method this of deciding from ignorance, without the trouble of examination.

It may well be supposed I could say more upon this hasty Narrative of my country-

iv THE AUTHOR'S

man, were the subject of importance; but I pass it by, to give the Reader some account of a journey I have lately made to the Glaciers of the Canton of *Berne*, and those of *Vallais*, which has taken me up three weeks.

A conviction of the relation there is between these Glaciers, and those of *Savoy*; their general resemblance, and the appearances which specifically distinguish them, are not the only fruits I have gathered in this journey. Fourteen new *Views*, with which I have enriched my collection in the excursion, will be subjects of a particular Relation, and of a new Work; yet it seems but just in this place, to advertise the Public, that these Glaciers are very far from being so agreeable to go over as those of *Chamouni*, and that they are in general much less considerable; that the roads, which frequently are difficult, and sometimes dangerous, the mountains we must cross, and the valleys of
eight

PRELIMINARY DISCOURSE. ▼

eight, ten, or twelve leagues in length, it is necessary to pass from one end to the other, exhaust the strength so much, we have not always enough of it remaining, to obtain a sight of those objects which merit our attention most; whereas the Glaciers of *Savoy*, have not so many of these inconveniencies: they are nearer to each other, and they offer in the space of a few leagues only, a multitude of objects, as extraordinary, as they are delightful.

It was on my return from this laborious journey to the Glaciers of *Berne*, and *Vallais*, that I re-entered the valley of *Chamouni*. The *Montanvert*, and the *Breven*, which I again ascended, have afforded new observations concerning the annual accumulations and increase of the ice, as well as of the manner in which these Glaciers are formed.

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THE first time of my ascending Mount *Breven*, I was astonished at the quantity of snow and ice that covered the foot of the Needles; but I was now more so*, to behold *three* new Glaciers, well formed, and already very considerable; to see the whole extent I had gone over two years before covered with snow and ice, as well as the little lake, upon the banks of which we had so comfortably rested. The Glacier *des Pelerins* was likewise considerably enlarged, and offered at its base, a prospect, which does not yield in point of beauty to the Mass of the *Arveron*. The accumulation of this ice resembles a city of crystal, and has this peculiar advantage, that it is not bounded in with broken rocks, but situated amidst lofty woods, and fields, and pastures, which afford the most delightful verdure: The
Mass

* These observations will be more striking to those who have already perused this relation; and have formed an idea of the places here mentioned.

PRELIMINARY DISCOURSE. vii

Mafs of the *Arveron* which I likewise revisited, was augmented about forty feet, and although this was in the middle of August, the Dome was not yet discoverable.

LET any one now represent to himself the prospect of eight immense Glaciers, in succession, suspended above a valley of no more than six or seven leagues in length; let him imagine them surrounded with the most agreeable and tender verdure, intermixed with crops of wheat and barley; and when he reflects that these Glaciers are sending forth a thousand rills, not less agreeable, than salutary and useful for the necessities of man, what subjects of meditation and gratitude do they afford, towards that infinitely good and gracious Providence, so fruitful in means, so powerful in effects, and so admirable in all his works!

viii THE AUTHOR'S

BUT if carrying our thoughts to their original, we consider how these fields of ice have gradually been constructed, we shall not be less affected with the contemplation of their small beginnings, than their vastness in completion. A view of these prodigious objects, strikes, astonishes, and confounds the imagination. That collection of overwhelming waves, heaped upon each other, which we see from *Montanvert*, has more than once obtained the most brilliant hypotheses; but the observation of their slight commencement disposes to Reflection, and conducts more surely to the truth.

I NOW experienced this upon the *Breven*, Two years before, I found but little snow upon that mountain: there was a considerable quantity in my last journey. I crossed over large masses which hung upon a steep slope, and had already taken the form of those waves of ice, in the valley of *Montanvert*; and these waves which
assisted

PRELIMINARY DISCOURSE. ix

assisted us in treading safely, have here no other cause than the winds which blow down in gusts over the tops of the *Needles*. This is what the most inconsiderable inhabitant of *Chamouni* is capable of demonstrating: But the very *same* cause which operates on the *Breven*, operates at *Montanvert*, at the *Glacier du Tour*, and at that *des Pelerins*, in a manner still more sensible; these *Glaciers* being more directly under the gullies or openings between their tops. The winds then are a *principal* cause, perhaps the only one, of the precipitation of these little hills and ridges of ice; they must necessarily operate more in proportion to the steepness of the descent; and it is for this reason, that the higher we advance upon these valleys of ice, the more the beds or ridges are united, till they become entirely so at the highest part of the valley, and continue thus to its extremity.

x THE AUTHOR'S

It is not only in the valley of *Chamouni*, that I could judge of this effect of the winds; but even upon the Glaciers and masses of ice, both in the *Pays de Vallais*, and in *Switzerland*: I shall give only one instance.

To the east of *Grimfel*, a very lofty mountain which constitutes the easternmost boundary of the States of *Berne*, and of the *Pays de Vallais*; there is a valley of ice, the largest, the most elevated, and the most beautiful one can imagine. At the top of this Glacier are distinguished those furrows, which point out the accidental direction of the winds. The waves begin at a little distance from the opening of the gulleys, and gradually increase by reason of the descent of the Glacier, which offers us at its bottom a collection of ice that is prodigiously grand and striking.

It

PRELIMINARY DISCOURSE. xi

It is from this magnificent Glacier that the *Rhone* takes its source. Sitting here at the foot of this immense mass of ice, with a view of designing it, I was prevented by a very strong, direct and regular wind, which it was difficult to oppose, and whose cold was most excessively piercing; but it lost of its force, in proportion as I retreated farther from the base of the mountain, till at last I perceived no more of it; the weather in the mean time was remarkably fine, and the sky entirely disengaged from clouds.

THE winds then which labour *continually* to pass these elevated gulleys, sometimes plunge to the foot of the mountains with more violence and fury, than the hurricanes that ravage our plains; and the hollows which they form are very easy to be distinguished. They raise new ice over the old, add projections to that which before was even, and seem to
give

xii THE AUTHOR'S

give the whole assemblage of waves a progressive movement and activity, which imposes upon our sight.

SUCH is the principal cause of the form which the ice takes upon the Glaciers, and of its accumulation at their feet. Those of *Chamouni* seem to prove it. Towards whatever point of the compass a Glacier is situated, we at all times find the wind blowing directly down upon us from it; and as this is the case with every one of them, however opposite, it accounts for that variety of their shapes, the first sight of which strikes us so wonderfully.

AFTER this digression upon the ice in general, (which is not so satisfactory I own as might be wished, but which the subject seem'd to call for, and may possibly afford some hints to others;) I think I ought to insert an observation of Mr.

De

PRELIMINARY DISCOURSE. xiii

De Roban Chabot*, which he mentioned to me at *Chamouni*. I have said in my relation, that the valley of *Montanvert* is only a quarter of a league broad; but this gentleman has observed, that at the foot of the *Dru*, there are several large pastures covered with herds of cows, which the eye can hardly discern from the opposite side: this observation leads us to estimate the breadth of this valley to be at least three quarters of a league, and in fact when I was the last time upon *Montanvert*, I found the observation to be just. I was deceived by appearances that imposed upon every person present; the mountains which surround this valley being so immeasurably vast, that the eye is not able to estimate its general *extent* with a sufficient degree of exactness; the air likewise, on account of its purity, does not send off objects so far, as below upon the plains, but brings them forward
by

xiv THE AUTHOR'S

by their brightness, and thus contributes to the illusion: they were these very causes which continually deceived us in our walk along the *Needles*.

It is certainly a very great mistake likewise in any person, to suppose it possible for him to ascend Mount *Blanc*: if its top, discovered from *Chamouni*, does not seem to advance so much, it is because Mount *Blanc* does not shew itself *there*, what it really is, on account of our being too near its base*. That this is the true cause is evident from the following circumstances, that so far from
appear-

* For the same reason that it is impossible to judge of the height of the Monument in London, from the distance only of a street's breadth; but fifty such buildings placed upon each other, would fall very far short of the height of Mount *Blanc*, from its base in the valley of *Chamouni*; the utmost length of which valley is not more than between six and seven leagues, and whose breadth does not anywhere exceed three quarters of a mile.

PRELIMINARY DISCOURSE. xv

appearing lower, when we are upon Mount *Breven*, it seems on the contrary to raise itself in proportion to our elevation; and it is but three leagues from *Chamouni*, that it appears in all its majesty. I have seen Mount *Blanc* from the *Fourke*, at the distance of more than a hundred miles; it there appears to rise so much above the chain of the *Needles*, that they seem only like a bank of snow at its foot.

IF hitherto the several descriptions which have been given of the masses and valleys of ice which one sees at *Chamouni*, striking as they are, have rather deterr'd travellers from visiting it, than encouraged them, the reason is, because it is not easy to connect the ideas of rocks, and precipices, and ice, with those of beautiful, extensive woods, rich enamell'd pastures, fields, and gardens finely cultivated; whereas in reality, this
country

xvi THE AUTHOR'S

country so far from being horrid, invites us even by its elegance and gaiety : it is besides extremely healthy, and its waters are good ; its warmth, it is true, is considerably abated by the neighbourhood of the ice ; but those who know the quantity of excellent honey sent annually from *Chamouni*, (which begins to be preferr'd even to that of *Narbonne*) will have no doubts about the agreeable temperature of this valley ; and excepting some few openings of a savage aspect through the mountains, the journey is not so difficult, since they have begun to mend the roads. In short, the inhabitants are civil, and not uninstructed, they behave with much propriety in conversation, and there is hardly any country in Europe, where good faith is so general as here. What I have said of the honest people at *Chamouni*, is applicable to those in every other part of *Savoy* I have travelled over. The inhabitants of *Cluse*, and of *Sallenche* in particular, have a native sweetness
and

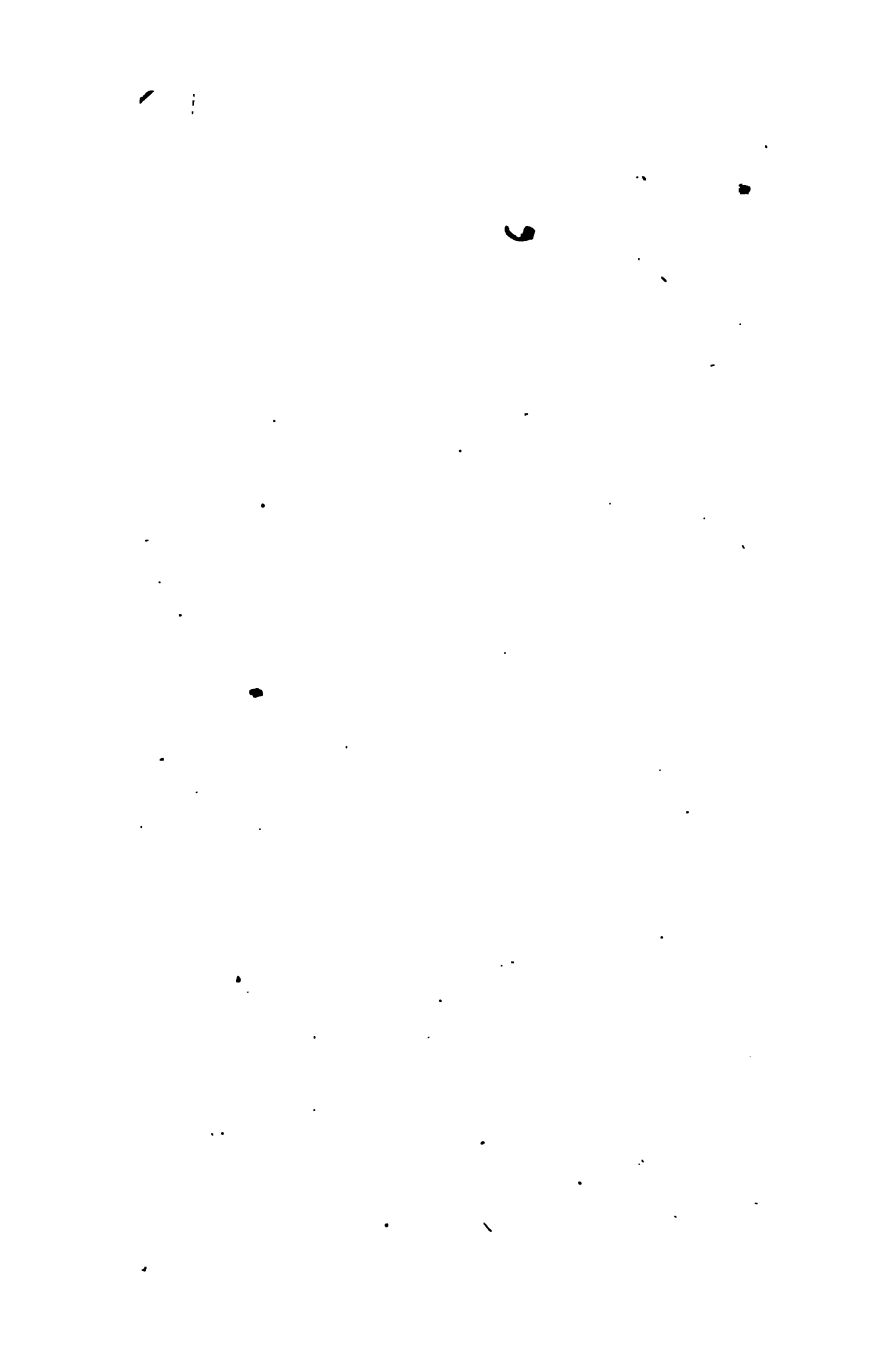
PRELIMINARY DISCOURSE. xvii

and complaisance in their behaviour, which renders them extremely sociable; and all *these* districts have the happiness of living under a very moderate Government, which protects and leaves them to enjoy in security the fruits of their labour.

JOURNEY



J O U R N E Y
T O T H E
G L A C I E R S
O F
S A V O Y.



John Lewis Junr.
1783

GENERAL DESCRIPTION

OF THE

Valleys and Glaciers

SITUATED IN

The PROVINCE and BARONY of

FAUCIGNY in SAVOY.

THE view of Nature in her simplest and most uniform appearance, never fails to have its effects upon an attentive beholder; such impressions become more agreeable, as the objects which excite them are more varied; and that rich display

4 JOURNEY TO THE

play of beauty, in her *lesser* elegant Designs, induces a serenity of pleasure, which is still more captivating: but of all the pictures she presents us, those of mountains covered with eternal snows, whose summits reach beyond the clouds, and whose forms are so majestic, are by far the most affecting, as they fill the mind with an idea of her grandeur and sublimity.

It is easy for a man of taste to add to and embellish works of art, which he proposes for his imitation; but his utmost efforts must fall short of equalling the greater models of Nature herself. This observation will be verified particularly here, where greatness and beauty are so exquisitely united in the same piece, that the utmost powers of *Description* can excite but a very faint, imperfect representation of the inimitable originals.

THE

GLACIERS OF SAVOY. 5

THE ideas men are apt to form of distant countries, from the relations of Travellers, are generally raised *above* the truth: their ideas of the Alps are universally *below* it: except the common passages by *France* into *Italy* and *Germany*, the rest are almost wholly unknown to strangers; those especially which are in *Savoy*. The productions of the country draw but few persons into it: the difficulty of the roads, the straights which must be passed, to go from one valley into another, insulate (if I may use the expression) their different inhabitants: and the moderation of their desires, which are bounded almost by the *necessaries* of life, prevents even a wish to go beyond their limits. There are indeed some few persons among them who are drawn into the world by commerce; but these, familiarized to objects constantly before them, in the places where they have been witnesses of their production, and less attentive probably to their forms, than to the
incon-

6 JOURNEY TO THE

inconveniencies arising from them, set very little value upon their beauties: with respect to the neighbouring people in general, who live on the outside of these Valleys, as the mountains which environ them, offer nothing to their sight but rocks and ice, they have not the least inclination to approach them out of curiosity.

AT the same time how many scenes are there highly worthy of our attention! fertile smiling valleys, rich delightful hills, beautiful and even extensive prospects; what variety of different forms! Here a level country finely cultivated, rising hills with farms and villages, and higher over these a ridge of mountains: on the other hand, luxuriant meadows intersected by the *Arve*, which breaks into a number of channels; whilst the eye conducted through the natural openings as through artificial vistas, travels on directly to the distance: or we look above the
tops

GLACIERS OF SAVOY. 7

tops of neighbouring woods, that sloping from our feet, wind down into the bottom of a dale.

THE farther we penetrate, the more we are delighted with the beauties of this romantic region. The views become still more and more engaging as we advance; every valley appears like a new country from its different form; overhanging rocks of a prodigious height, and torrents pouring down in sheets from their very summits, are such wonders of Nature, as it is impossible to look upon without a mixture of astonishment and awe; to heighten the picture, we may add the different tints of rocks and mountains, their contrast with the browner colour of the woods, and the whiteness of the snow and ice, especially when enlightened by the sun; their tops at sun-rise taking the similitude of melted silver, and at his setting that of gold, whilst the refractions of his rays by their

C

angles,

8 JOURNEY TO THE

angles, sometimes offer such variegated splendor, as exceeds description.—

Mille trahens varios adverfo sole colores.

THERE is still a singular emotion which the sight of this country excites in the mind, from the prodigious height of the mountains, which surround these valleys on every side. Mount *Blanc* especially, produces a sensation which is very difficult to explain. An obelisk of one hundred yards, appears of a prodigious height, yet we can form a tolerable idea of it from recollection or imagination only; but when that height is thirty or nearly forty * times increased, upon a base proportionably massive, which yet the eye can take in at one view, the mind is almost lost in the sublimity of its
own

* The height of Mount *Blanc*, from its base in the valley of *Chamouni*, falls little short of four thousand *English* yards.

GLACIERS OF SAVOY. 9

own idea, and no tongue whatever is capable of describing, and conveying justly to others, the successively humiliating, elevated, awful feelings of the soul, upon the sight of such an object.

SUCH are the beauties of this country, which would probably have still continued unknown, but for the rude relations of its peasants, who bring us annually their honey and their crystals. The frightful picture which they gave us of their valleys of ice, and of their stupendous mountains, those extraordinary accounts, (which procured these snowy precipices the appellation of *Les Montagnes Maudites* *) excited the curiosity of two *English* gentlemen †, who resided some time since at *Geneva*.

C 2

IT

* The accursed Mountains.

† The late Colonel *Windham*, of *Norfolk*, and Mr. *Pocock*.

10 JOURNEY TO THE

IT was in the month of June 1741, that they undertook this journey, well mounted and armed, as if they were going into an enemy's country; they had the precaution likewise to take with them, not only ammunition, but provisions and baggage, and encamped in the open air, near *Sallenche*. There are still some people at *Chamouni*, who remember to have seen them under their tents, (which were pitched in a meadow by the banks of the *Arve*) and keeping a strict guard round their little camp; a spectacle this so new and singular to the good people of the country, that their wonder and astonishment at it, contributed not a little to the amusement of our Travellers.

THE happy return of these gentlemen without any disagreeable accident, and the description which Mr. *Wyndham* gave of their journey, excited the curiosity of others to follow their example: but all these Travellers contented themselves
with

GLACIERS OF SAVOY. II

with going up to *Montanvert*, descending into the valley, and walking a few paces upon the ice. It was reserved for Mr. Professor *De Saussure*, to be the first who should have the courage and resolution to penetrate across the ice, to the very extremity of the valleys.

HIS various and extensive knowledge, which he possesses in so eminent a degree, rendered his remarks interesting, and occasioned a desire to have them published, particularly those which relate to the natural history of those places.

C 3 R O U T E *

12 JOURNEY TO THE

R O U T E

FROM

GENEVA to SALLENCHE.

THE Glaciers we are going over, are situated to the north east of *Geneva*, at the distance of about sixteen or twenty leagues, and are surrounded with the highest, and most rugged of all the mountains of the *Alps*, namely, those which continue the chain from Mount *Ceney* to great *St. Bernard*, and from whose summits, if they were accessible, one might discover the plains of *Piedmont*. The most favourable time for this journey is

GLACIERS OF SAVOY. 13

is in the end of July, or the beginning of August; for at this season the latest snows being generally melted, leave the dangerous passages discoverable. If the traveller thinks proper, the journey may be made on horseback, or even in a carriage as far as *Sallenche*; but he cannot possibly have the pleasure of seeing and observing every thing that merits his attention so well this way as on foot; besides that he must necessarily be subjected to great precautions; and it was for these reasons, that we made choice of the latter manner of travelling, in preference to the other.

FAVOURÉD therefore by the weather, we set out from *Geneva* early in the evening, and laid at *Bonneville* that night. This route, which is but five leagues, is both safe and entertaining.

BONNEVILLE, situated at the foot of *Mole*, between that mountain and the

14 JOURNEY TO THE

river *Arve*, is the capital of *Faucigny*, where the Intendant of the capital resides. As it was night when we arrived, the place appeared to us extremely agreeable; a fountain in the middle of a large square planted with trees, and surrounded with houses which seemed tolerably handsome, their windows enlightened, and the people civil and polite, all contributed to give us a grand idea of the place; but the morning robbed it of a part of those beauties, which we thought it had possessed. The houses were large indeed, but rather in decay; the principal church, though great, is in a bad Taste, and that of the *Barnabites*, though tolerably elegant, is very small. Their convent is the finest building in the city. A bridge over the *Arve*, which we cross at this place in our way to *Cluse*, is large, massy, and well built, conducting us by the foot-way into a valley about half a league wide, and twice as long, through which the river winds its course, and on each side

GLACIERS OF SAVOY. 15

side of whose banks are meadows covered with shrubs, and bounded by lofty mountains enriched with woods. After an hour's walk, the country opens, and forms an agreeable plain of an oval figure, the shorter axis of which may be about two leagues, the longer three: it is here that the *Arve* and *Giffre* meet. The *Giffre* is a river, which, taking its rise from the melting of the ice at the Glacier of *Buet*, runs by *Taninge*; it swells exceedingly upon a fall of rain, and abounds with trouts, some of which are caught that weigh fourteen or fifteen pounds each. This part of the country is reckoned to be the most fertile, and best cultivated of any in *Savoy*. We meet no shocking scenes of want and poverty, and every one appears satisfied with his condition. The women are handsome, and dress neatly, and most of them wear a small straw hat, which gives them a genteel air.

16 JOURNEY TO THE

WE stopped a little beyond *Songy*, a village about a quarter of a league in length, where there is a tolerably handsome church; and, generally speaking, we found this route very pleasant. The road from *Songy* to *Cluse* is highly entertaining: The most engaging points of view; hills delightfully enriched, sloping downs, and ridges of the finest verdure, with the country houses of citizens, which catch the attention at a distance, and enliven all the landscape, sufficiently compensated our labour; even the mind itself found a most agreeable repose from the sight of this valley, bounded in by lofty mountains: It seemed to us a little world apart, where nothing was wanting to the happiness of man.

ARRIVED near *Cluse*, we passed by the foot of a rock, which appears as it were suspended above the road, and whose brow is overhung with trees. It is reported that in this place the inhabitants of *Cluse* once
defeated

GLACIERS OF SAVOY. 17

defeated a party of foreign troops, by rolling down stones upon them from the mountain. Farther on, we find a bridge across the *Arve*, but in a ruined state and condition, and near it is a path cut in the rock, by which the traveller is conducted to *Annecy*; its top commands a view of the whole valley, and even that of *Geneva*, which is seen through an opening between two mountains.

CLUSE is by no means handsome, nor has it much the appearance of being wealthy; its principal inhabitants are Watchmakers, Joiners, and Shoemakers, but no people of fashion reside here. The town was formerly under the government of *Savo*y, possessed of the highest privileges, and was the capital of *Faucigny*. A conflagration, which left very few of its houses standing, occasioned part of the inhabitants to remove to *Bonneville*, with the Intendant of the Province where he settled; but the town has since been rebuilt.

THE

18 JOURNEY TO THE

THE *Clusians*, who reckon about three hundred families, pretend that their town is better peopled than *Bonneville*, which may be the case, though it is not so extensive; but the streets and houses here, are not to be compared with those of *Bonneville*. The freedom of this corporation may be purchased for the amount of only a hundred livres of *Piedmont*, which gives the right of trading in cattle and other commodities, without paying the duties and bridge-tolls, as far as *Suze*. The Count *De Remilly* was desirous of abolishing this privilege, exacting the same duties from its burgesses as from strangers: an action was brought, and the affair argued in court. The Count has since acknowledged the right of such as staid in *Cluse*, but is unwilling to allow the right of those at *Bonneville*, and the matter is still in litigation.

THE residence of many of the inhabitants likewise in the country at a considerable

GLACIERS OF SAVOY. 19

rable distance, where the comforts they enjoy are so much beyond those of towns, would soon have made them forget their fellow citizens the *Chusians*. These were sensible of it, and conceived the only means of recalling them would be by instituting patriotic Festivals and Games; and such in fact is their influence upon the heart, that they assemble to them from all parts. Every year, upon the second feast of Pentecost, the citizens in arms, and in their uniform, meet to shoot the bird* upon a very high rock. He who brings it down is acknowledged Abbot of the

* This bird is usually of wood, about the size of a pigeon, whose breast is covered with a plate of iron, but perforated so as to be loosely placed upon a short spindle, at the end of a mast upon an eminence. Considerable honours and emoluments are given in many towns of *Switzerland*, to the person who brings it down with a single bullet: At *Lausanne* and *Lutry*, upon the lake of *Geneva*, besides a reward of twenty crowns, it intitles him to an exemption from a tax upon

20 JOURNEY TO THE

the *Bafocbe*, and the first use he makes of his power, is to create a free man.

THE management of the affairs of this city, is vested in a council consisting of four syndics, and twelve counsellors, who govern by *written* laws. *Cluse* has still a *Marquis*, but who can claim no other privilege, than that of having the tongues of all the cows and oxen that are killed there. I shall conclude what I have to say of this place, with observing that the city is not to be discerned till you are upon it. It hath before it the large sweeping

upon the purchase of an estate, provided the purchase be made within a year; and he has moreover the privilege of exempting one friend from the same payment; which advantages go on to the victor at the next annual festival. The reader probably has anticipated a comparison of the similar exercise, in honour of *Patroclus* and *Anchises*. It may nevertheless be remarked in favour of the *Clusians* particularly, that the modern institution is superior in its motives, more humane in its exercise, and more honourable in its rewards.

GLACIERS OF SAVOY: 21

ing * valley I have mentioned, of an oval form, behind it and on one side lofty mountains, which project, and seem to meditate its destruction.

At our departure from *Cluse*, one would have believed it impracticable to go to *Sallenche* without crossing the mountain, and we were surprized to find a plain level road, running in a narrow defile, between high mountains, that form almost a dome above it: the passage between them is filled up by the *Arve*, and the road through which we pass; but it opens insensibly; the River enlarging forms a variety of small islands, and in some places there are meadows between the road and the *Arve*: the farther we go on, the more the objects are diversified: we meet with rocks cut perpendicularly down their sides, whose first appearance gives us an idea of some venerable antique building,

orna-

22 JOURNEY TO THE

ornamented with cornices and mouldings; again we come at massy fragments, which obstructed in their fall by others, form in the suspension vaults and caverns, that are overgrown with shrubs and bushes: add to this the tread of travellers, the sound of whose steps is many times re-echoed, and the trotting of a single horse so multiplied, that one might easily suppose there was a detachment of cavalry coming up upon full march.

BUT what chiefly merits our observation in this route, is a most magnificent cavern, which the sun never enters, and which is hollowed into the middle of the mountain above *Balme*, a hamlet about a league from *Cluse*.

To arrive at it, we were obliged to climb this mountain, over thickets or rather underwoods, to the foot of the rocks. After several fruitless attempts to get up,
we

GLACIERS OF SAVOY. 23

we availed ourselves at last of the branches of a nut-tree that hung over, which we just managed to catch hold of, and placing our feet upon the end of a pole, held up by one of our conductors to the cavern, by this means gain'd the top. What ideas did the sight of this place afford us! Its front presents a large portico formed by the rocks, with two entrances; that on the left pretty high, but which goes in, only a few paces; whereas the other on the right sinks into the body of the mountain, and the shadows gradually deepen, till the sight is terminated by absolute darkness.

PREPARED to enter it, we lighted several flambeaux, and followed our conductors under the arch: a passage at first of a considerable width, but narrowing after we had advanced about fifty yards, led us into chambers of a very singular form, the sides of which were covered with a shining varnish, and glittered with
a thou-

24 JOURNEY TO THE

a thousand colours; crossing these chambers we came to a magnificent kind of chapel, formed by the hand of nature, crowned with a cupola of bold construction, and ornamented with a variety of figures: we find here stalactites of different sorts, jets of a very hard substance, but brittle as glass, and tubes, some of which are opaque, and others transparent: the walls in turn are likewise decorated with variety of ornaments, yet so admirably, though accidentally, suited, as not to interrupt a Unity of style which is throughout the whole*.

IN

* The peculiar suitableness, as well as a considerable portion of the beauty of these ornaments, is rather to be sought for perhaps, in the *elegance* and *harmony* of the Author's own mind, than in the objects themselves. In all his descriptions, he discovers that luxuriance and enthusiasm of fancy, which without instructions have constituted him the *Painter* and the *Musician* of Nature.

GLACIERS OF SAVOY. 25

IN one part again, we have columns on their pedestals, others overturn'd, or seemingly suspended, whilst others represent in a very picturesque manner, the ruins of a magnificent palace. Turning to another part, you might fancy yourself in an arsenal, with a profusion of arms ranged in different forms, discoverable by their splendor; and on every side almost, were brilliants, which sparkling at the different movement of our lights, still aided the astonishing variety.

AFTER having attentively considered, and always with a fresh astonishment, the beauties which this place represented, we again went forward; and now counting up our steps, and finding that we had advanced about four hundred paces, our conductors recommended us to be more cautious how we went on, as we were approaching to a very deep hole in the middle of the cavern, of which indeed
the

26 JOURNEY TO THE

the hollow sound of our voices gave us notice. Arrived at its brink, we ventured to throw down a lighted grenade; surprized at not immediately hearing the effect, we were prepared to repeat the same experiment, when after a minute and a half's expectation, we were astonished with the loudest report imaginable: happily for us, there were some flambeaux at such a distance, as not to be affected by the explosion, which extinguished all those that were near; even the thick volumes of smoke which came up from the bottom, might alone have been sufficient to extinguish them; but taking the precaution to carry some lights farther off, the experiment may be made without danger.

FROM this abyfs we advanced four hundred paces farther into the mountain, till stopped by the waters, we were obliged to return back the same way we came. There are in many places heaps of crystallized

GLACIERS OF SAVOY. 27

talized matter, of a pyramidal figure, which sometimes interrupt the passage, and these heaps or masses, which are formed by water dropping from the top and sides of the cavern, may in time wholly stop up the road. Such was the effect of our long stay here, that at first coming out of the mountain, the air appeared to us of an extraordinary splendor, and to vibrate as from a conflagration in the night.

AFTER warming ourselves in the sun, we descended the rock by the same means we had employed to ascend it, some of our conductors being ready to receive us below. We then crossed the rest of the mountain through woods, with much labour, and were often under a necessity of sliding down the declivity of hills, not without several falls, in which some loose fragments of rocks join'd the party: to save himself trouble, one of the company rode down upon a large stone, which carried

28 JOURNEY TO THE

ried him safe to the bottom. The time we spent in examining this cavern was at least four hours. After taking a little repose at *Balme*, we continued our journey in the road to *Sallenche*, which offered us different objects, and procured us new pleasures.

FROM the foot of a beautiful cascade, we had the view of a large and lofty mountain, seated upon a base finely cultivated; lower down were meadows, corn fields, woods, houses, which seemed to contest the pleasure of delighting us; whilst several little islands formed by the *Arve*, cloathed with a verdure which sets off the whiteness of its sands, and the valley of a considerable extent, offer to the man of taste and sentiment, a composition of objects that touches him, and gives his mind a satisfaction and a pleasure, which may be felt much better than it can possibly be described.

AT

GLACIERS OF SAVOY. 29

AT some distance from this spot, we passed the village of *Magland*, the most agreeable we had yet seen. The women of the place, who are handsome, added to the agreeableness of it, and the graceful simplicity of their manners, still heighten'd the beauty of their persons. The inhabitants are tradesmen, who enjoy every convenience.

A LEAGUE farther, we contemplated with singular pleasure the fine cascade of *Nant d' Arpenaz*. It is a torrent which falls from the summit of a mountain with a prodigious noise, amongst rocks remarkable for their colour of musk and ocre, and for a concentric form, that serves as a direction to the sheet of water, which nevertheless is detached almost to the bottom: this water, disengaged from the mountain by projecting rocks, falls perpendicularly upon a flat ledge that divides
it

30 JOURNEY TO THE

it into a number of branches, and forms in short the most beautiful cascade*. If there

* Its fall from the top of the rock to the bottom, is said to exceed eleven hundred English yards.

Upon reading the description of this cascade with a gentleman who is perfectly skilled in the *Welsh* Language †, he was little less surprized at the name of it, than at its extraordinary height; *Nant* in that language signifying a *Brook* or *Rill*, any stream of water that is not large enough to come under the denomination of a River. As this observation favours the opinion of the *Welsh* Language being derived from the *Gaulish* or *Celtic*, we have taken the liberty to add an extract of a letter upon this subject, which was written in the year 1771, to a person whom it is our highest pleasure as well as duty to honour.

*"The long contest among the learned, when and
"by whom Switzerland was first peopled, seems at
"length to be detremined in favour of the Galli, or
"Celts, especially with regard to the Pays de Vaux.
"Most of the names of towns and villages in the
"Canton of Berne, have been lately analysed by a
"learned author, who has found that their Etymo-
"logy,*

† The Rev. Mr. Pryfe of Norwich.

GLACIERS OF SAVOY. 31

there happen to be but a slender stream,
and the wind is high, one sees it separat-

D

ed

“logy, traced in the Celtic, gives in general a description of the situation of each particular place, by its vicinity or relation to some Mountain, Spring, or River, with respect to the general fertility of the soil, or the usual products of its lands.”

“He has endeavoured to carry his researches farther: to determine from what places, and into what parts the first Helvetians emigrated, after they came into this neighbourhood; and the names of towns still serving as a clue, he has found that villages, which with regard to their situation, had any thing analogous to those in the south of Switzerland, were in Berry, Poictou, and Tourain, called by names almost perfectly similar. —Whatever degree of credit may be due to this kind of etymological proof, one cannot help being prepared by it to believe any instance of the Fact, which is said to subsist at this day in the North of Italy. The mountainous face of this country, renders it as proper to preserve an ancient dialect, as that of the Alps, in the neighbourhood of Verona, and the same cause has produced the same effect. — Among the patois of the Canton of Berne, are remaining

ed from the mountain, and waving like a
 ribband lightly agitated; and it was in
 this

*"maining to this day, not only some words purely
 "Latin or Greek, but many absolutely Celtic. There
 "is a difficulty to account for the Greek words in par-
 "ticular getting thither, but after all, it is possible
 "that these might be originally Celtic. A Welsh
 "gentleman who passed through the mountains of the
 "Canton of Berne, in order to see the Glaciers, af-
 "sures me, that the Mountaineers still use many
 "words that are purely Welch. These examples
 "serve to confirm me in the opinion, that the Celtic,
 "of which the Welch is a Dialect, said to differ
 "little from the mother tongue, was the language at
 "least of all the south-west countries of Europe."*

It may be observed from what is said by the ingeni-
 ous writer of this letter, how uncertain the position
 is, that the *Welch* in *Bretagne* are descended from
British Emigrants about the fourth century: There
 were probably some Descendants of the first Celtic Co-
 lonists, who settled in *Tourain* and *Poitou*, then re-
 maining, who might long before that time have crossed
 the *Loire*, in the neighbourhood of *Nants*, and settled
 in a collected body in *Bretagne*, where they were
 joined

GLACIERS OF SAVOY. 33

this agreeable form we had the pleasure of surveying it. Arrived at the village of *St. Martin*, not far from *Sallenche*, we crossed the *Arve* again by a stone bridge of a moderate size. An inscription imports, that having been thrown down in the year 1733, it was rebuilt in 1736.

joined by their brethren from this kingdom, whose ancestors might have embarked from the coasts of the same province into *Cornwall*, *Wales*, *Ireland*, and the Isle of *Man*, and from thence probably into *Scotland*, in all which places, sister dialects of the *Celtic* continue so many living languages to this day.

D 2 R O U T E

R O U T E

FROM

SALLENCHÉ to PRIEURÉ,

IN THE VALLEY OF

C H A M O U N I.

THE city of *Sallenché*, where we lodged, and which is upon the right of the *Arve*, in ascending towards its source, is in an agreeable situation. The people of *Cluse* maintain that this city is inferior to theirs, but the pretension is inexcusable only in a native of *Cluse*: for *Sallen-*

GLACIERS OF SAVOY. 35

che is not only more agreeable, but also more extensive. The church here is the largest of all we have seen in *Faucigny*; it contains some tolerable pictures, and rich ornaments, seven altars well decorated, and a kind of censer or silver gilded, weighing seven pounds, which was presented to them by a German.

THIS city was formerly only a hamlet inhabited by a few tanners, but has gradually increased, and especially as they tell you since the destruction of a city, which was about a league distant, called *St. Denis*. The Burgeſſes of *Sallenche*, are Lords of their own Seigniory; the freedom of the city may be purchased for thirty livres, but costs fifteen more for the registering. It forms two fraternities, that of *St. Rac*, and that of *Sallenche*, and is divided into four quarters; the first trades with *Geneva* and *Switzerland* in cattle, the second in cloth and wool, the third in different utensils of iron and cop-

36 JOURNEY TO THE

per, and the last furnishes carpenters, masons, and domestic servants, for every department ; these for the most part go to serve at *Paris*, but as soon as they have acquired a moderate competency, return again to settle in their own country.

SALLENCHE has several very considerable fairs, particularly for cattle ; and the inhabitants of the neighbouring villages are frequently collected here, to the number of eight or nine hundred. The corporation is governed by a council of twenty-four, with four Syndics at their head, and their President must always be a Gentleman. The chapter has been founded almost seven hundred years, it is composed of twelve Canons, and four superior dignified Priests ; the Dean is a person highly respected. This chapter is rich, having in its possession the lordships of several villages and districts, among which is the valley of *Chamouni*. There is moreover at *Sallenche*, a convent of religious *Ursulines*, and one of *Capuchins* ; the latter is near
the

GLACIERS OF SAVOY. 37

the road, and hath on the outside a chapel dedicated to our Lady of Consolation, under whose statue we read this inscription :

*Vous que le Ciel couronne, & la Terre revere,
Fille du Tout-Puissant, & Mere de son Fils.
Vous qu'il daigna lui-meme appeller notre Mere,
Daignez de vos enfans ecarter les perils. §*

A RIVULET, which they call *Sallenche*, flows by this city, and falls into the *Arve* below the bridge which I mentioned our having crossed. In going to the valley of *Chamouni*, it is necessary to repass it, and follow the course of the river, which ex-

D 4

panding

§ The English reader may form some idea of Popish Divinity, from the following almost literal translation of these lines.

*O Thou, whom Heav'n doth crown, and Earth revere,
Th' Almighty's Daughter, Mother of his Son,
Thou whom he deign'd to call our Mother here,
Protect thy children, and the Mother own.*

38 JOURNEY. TO THE

panding itself here considerably, forms some large islands.

IN the tradition of the country, this valley was formerly a lake; and its appearance renders it not at all improbable. The land is for the most part still a marsh, and *must* continue such, so long as the *Arve* is without regular mounds to confine its channel.

DEPARTING a little from the course of the stream, we meet with several small hills covered over with flates, which the peasants make use of as tiles. The opposite bank is well cultivated, presenting a very agreeable prospect; there are some lands laid out in vineyards, but the richest villages and districts, are those which have none, whose inhabitants live upon the product of their milk and their cattle.

IN

GLACIERS OF SAVOY. 39

IN proportion as we advance, the landscape puts on a new face, and the opposite bank no longer shines upon us. We have mountains before us covered with dark firs, and lands which the *Arve* alternately overflows and deserts; yet these form no unpleasing contrast to the tillage, the meadows, and the habitations upon our road; and set off the little village of *Passi*, which appeared to us far from being an unpleasant place. The lovers of antient monuments will not be displeased to read the two following inscriptions, which being found when the church was building, they have worked into the porch. They are in a fair character, and seem to have been written about the Augustan age.

40 JOURNEY TO THE

MARTI	MARTI. AVG.
A. ISVGIVS. A. P.	PRO. SALVTE
VOLT VATVRVS	.L. VIBI. L. FIL
FLAMEN, AUG	FLAVINI.
II. VIR. AERARI.	L. VIBIVS. VESTNVS.
EX VoTo	PATER
	II. VIR. IVR. DIG.
	III. VIR. LOCP. P.
	EX VoTo.

Thus far we had travelled without a guide upon the journey, but the ways which from this village begin to be more perplexed, obliged us now to take one, under whose conduct we struck across some meadows and vineyards, by a path which conducted us to the public road. Our route was no longer over a plain country, we were constantly obliged to ascend and descend alternately; but although this was fatiguing to us, the different objects which offered themselves to our view had a spirited beauty, which made us ample

GLACIERS OF SAVOY. 414

ple amends. The road is often overhadowed with trees; we meet with brooks of the clearest and most refreshing water, and passed some torrents, whose murmurs join'd to the rustling of the leaves agitated by a fresh gale, which blowed from the mountain on the east, gave us most agreeable sensations: continuing our walk in this manner about three hours, we arrived at an eminence, upon which, on one hand we discovered a small lake, and looked down upon the *Arve*, which was foaming in a large deep hollow on the other.

SEDUCED by the beauties of this spot, we stopt a while to rest ourselves. A gentle breeze just moved the surface of the Lake, the banks of which on one side, have a rude appearance, with an air of melancholy, whilst upon the other is a smiling meadow, brought forward by the ground of some delightful woods. The water, drawing down in eddies, bounds and spouts between the rocks, and haf-

tens-

42 JOURNEY TO THE

tens to precipitate itself into the *Arve*, which heaves and struggles along with difficulty; the swooning murmur of the fir-trees upon the mountains, added to the bright appearance and distinguished aspect of their snowy summits, of which we now began to form some idea; each of these objects taken separately, and much more all together, made a strong impression, and spoke in the most lively manner to our hearts.

FROM this engaging eminence, the road divides into two branches; one of these descends in a straight line to the *Arve*, the other, turning to the left, carries you to *Serve*, the last village in the valley of *Sallenche*; having passed in my journey by the one, and in my last by the other, I am now going to describe them both.

IN:

GLACIERS OF SAVOY. 43

IN passing from the little lake to *Serve*, we take the left hand road, which conducts us across a hollow, like the bed of a great river, whose bottom is covered with large pebbles and fragments of rocks, amongst which there wind along some slender streams.

THE appearance of this place seems to intimate, that there was formerly a collection of waters upon the mountain, which having burst the barriers and broken down the mounds that stopped its course, at last forced its way, carrying with it in its passage, the earth and stones of which we now see the remains.

THERE is still one valley more to pass before we arrive at that of *Chamouni*, the little valley of *Serve*. This village is situated in a beautiful plain, well cultivated, and which produces excellent crops; we passed it at the time their fields particularly

44. JOURNEY TO THE

cularly call for the attention of the husbandman, and even demand his care; but this reason did not prevent the civility of these good people, who left every thing, to come and bid us welcome.

AT some distance from *Serve*, we crossed a torrent, and some rocks of a black ground streaked with white grooves. The general form of these rocks has much the look of a ruined fortress; they distil a thick glutinous water, and one finds there a kind of green and yellow moss, of use in painting. Going out of this small Canton, we again crossed the *Arve*, and a little farther is the place where the road, which remains to be described, unites to that we have now passed. I return then to the little lake upon the eminence.

QUITTING its banks, we descended by a road, rather steep, to the *Arve*. This river.

GLACIERS OF SAVOY. 45

river is not any where very rapid: obstructed and confined by large rocks within its channel, it roars, it foams, and pours down in several cascades.

WE passed it at this place by a slender trembling wooden bridge* ; but to enjoy a fine view, it is necessary as soon as we are over, to coast along its bank toward its source, to about the distance of an hundred and fifty paces. We there see the river precipitate itself near sixty feet, and cover by its fall a considerable extent of surface. The rocks which are on the right hand, and which are called *La tour de Barré*, produce likewise a fine effect; the name indicates sufficiently their steep and perpendicular form; some of them project, rising up from the bosom of the water, others are as if suspended in it, and the little trees which grow upon their ridges,

* This is called by the inhabitants the Goat's Bridge.

46 JOURNEY TO THE

ridges, add still more to the beauty of the composition; the force of water, and its noise, which is terrible, shake even the very rocks upon which we stand.

AFTER having satisfied our curiosity with this prospect, we resumed our road through heaps of broken rocks, along a valley which rises insensibly, and immediately entered into a cool refreshing wood, from whence we discovered, on the left hand, the little valley of *St. Michael*, where we soon arrived, and which is separated from the valley of *Serve* only by a chain of rocks, which at most are not above a thousand paces in breadth.

THERE are some few habitations in this valley, but that which merits most to be seen, is a mine of copper, which after being worked for thirty years, is now abandoned. We halted upon the green turf before a cottage, from whence the
 arance of mount *Blanc* was most
 pleasingly

GLACIERS OF SAVOY. 47

pleasingly astonishing; the greater part of it was hidden from our view by clouds; its top alone was visible.—The illusion was complete.—It seemed another world descending upon our own.

It is at the going out of this little Canton, that advancing towards a defile, between some rocks and the *Arve*, we arrived at the place where these two roads, which I have been describing, reunite. From this point of their reunion, the route continues rising into the defile; the roaring of the *Arve*, still more obstructed and confined, the appearance of a mountain wholly covered with black firs, every object gave us the idea of a frightful gloomy desert; however at last, after crossing a little wood, we discovered a green plain, from which begins the valley of *Chamouni*. The sight of this valley, crowned by the highest mountains in *Europe* covered with eternal ice, the whiteness of which contrasting the deep green

of

48 JOURNEY TO THE

of the firs, and that lighter and more agreeable colour of the herbage, stopt our walk for some time. We were never tired of admiring the fine effect of this landscape.

CROSSING now a small stream (the water of which reddens the stones over which it flows) and a wood which was adjoining, we discovered the greater part of the valley, which extends from west to north-east, in the form of a crescent; what struck us first, were the heaps of ice, which descend from the higher valleys, even into the plain; we next perceived some scattered groups of wooden cottages, with churches, chapels, and curates houses, which being almost the only edifices of stone, are distinguished at a distance by their whiteness. The road is straight, bounded by a sort of palisades made of stakes driven into the ground, and interwoven with branches of the fir-tree: a manner of hedging which
is

GLACIERS OF SAVOY. 49

is better than ours to protect the fields from cattle, and their owners fear no other invaders. The inhabitants who were at this season employed in their fields and gardens, enlivened and compleated the landscape.

AFTER two hours walk, we once more passed the *Arve*, and sitting down to rest us near a brook that empties itself into it, we heard a most prodigious rumbling in the mountains, which we took for the effects of thunder, though the air was all this time serene; and we judged the tempest, though at present on the other side of the mountains, yet would certainly come up and overtake us, but we were agreeably mistaken, and were afterward informed, it was occasioned by the falls of snow, which separated from the Glaciers, roll down sometimes to the bottom of the valleys. In short, we arrived safe in the evening at *Prieure*, the most considerable village of *Chamouni*, which receives its
name.

name from a small Priory established there. The frequent journeys which the curiosities of this place have lately occasioned, raised a wish for a decent house of reception and entertainment for strangers : and an honest careful widow has for some time provided one, in which we were accommodated very much to our satisfaction.

THE valley of *Chamouni* is between six and seven leagues in length, and not above a quarter of a league in its greatest breadth, in some places not above four hundred paces: and the *Arve* passes through its whole length : the inhabitants are about fifteen hundred souls ; it contains three parishes, that of *St. Joire*, *Prieure*, and *Argentiere*, which together form a community, governed by seven Counsellors and a Syndic. The Chapter of *Sallenche*, as I said before, enjoys the lordship of this valley, it supplies the churches, and draws revenues from a country, which does not seem capable even of supporting
its

GLACIERS OF SAVOY. 51

its own inhabitants. This chapter was heir to a third part of every man's estate and effects, who died without children, but the community has bought off this right, for the sum of thirty thousand *Piedmontese* livres, about twelve hundred and fifty pounds sterling.

THE inhabitants are worthy, civil people, and tolerably well instructed; there are few amongst them but are taught to read; they are all poor enough it is true, but no one begs here, or goes out of his country to do it, and law-suits are unknown. Their lands, their cows, and their bees, are all their riches; what trade they have consists in hemp, crystal, honey and cattle; their lands are well managed, and they employ their cows in the tillage of them. They sow in the month of May, and reap in the month of August: they have no vines here, and very few fruit trees of any sort; but their soil produces oats, rye, barley, and a
small

52 JOURNEY TO THE

small quantity of wheat; the land, as it is light and open, is plowed only once in a year, tho' they manure it with great care and labour. It is sown with corn five years successively, after which it rests the five succeeding years, as pasture for their cattle. They drink the water of the *Arve*, which is fresh and pleasant; it has a whitish appearance indeed; yet without any bad effects*; while they attribute to the water of a neighbouring source, a species of weakness to which the inhabitants of a hamlet opposite *Prieuré*, on the other side of the *Arve*, are subject. In short, the rays of the sun concentrated in this valley, occasion a sufficient degree of heat for three months in the year, to
com-

* The swelled throat, so peculiar to the inhabitants of the *Alps*, and which is almost general in the *Pays de Vallais*, is supposed to be occasioned by the thickness of the waters, impregnated with a clay, that carries some noxious salts along with it, which foul and stop up the glands.

•

GLACIERS OF SAVOY. 53

compensate in some measure for the unprolific coldness of their winters.

THE same evening we arrived, the people of the place, who are used to conduct strangers over the Mountains and Glaciers, came to offer us their services. These conductors generally carry in their dorser, every thing which the traveller may have occasion for: their spirit, agility, and strength are surprising, and in short their assistance in these excursions are not barely useful, but absolutely necessary: they ought not however to be taken at random, as there are some of them doubtless who have more knowledge and experience than others. We engaged one to conduct us up Mount *Breven* the next day: this mountain, which is very high, is opposite to *Prieuré*, and it must have been still much higher, if we may judge from the rifts, and fallen rocks, we saw on its summit. The reason which induced us to begin our discoveries from
this

54 JOURNEY TO THE

this mountain was, that being over-
against the magnificent chain of the
Glaciers, and the nearest to their situati-
on, we could have a better *general* view of
them from its top; and as it was prudent
to avail ourselves of the weather,, which
then promised to be fair, we got up an
hour before day-light, and the instant it
appeared began to ascend the mountain.

D I F-

DIFFERENT EXCURSIONS
IN THE
VALLEY of CHAMOUNI.

Of the Mountain called BREVEN.

THIS mountain, of which the foot is covered with a few fir-trees, and some brushy under-wood, is entirely bare at the top. We were five hours and a half in climbing it, by a difficult passage amongst the ruins, which fall from time to time down its sides; some of these fragments are huge, mis-shapen blocks of
E stone,

56 JOURNEY TO THE

stone, and others flat, with sharp edges; no path is traced to its heights: to arrive at one of its summits, there are three embrasures in this rock, which are so nearly perpendicular, we could hardly believe this *was* the passage, but our guide assuring us it was the place which Mr. *De Saussure* had climbed the mountain before us, we then took courage: as the surface was covered with small pebbles, which slipped from under us, it was necessary to understand how to take the advantage of the clefts and fissures of the rock, in securing our hold and placing our feet; it was infinite labour; the sweat ran down our faces; the instant we thought ourselves sometimes perfectly safe, in having grasped the solid rock, the edge would deceive us, and break off in our hands; or the stone upon which we set our foot would escape, and we were carried down with the rubbish; but these accidents, which might have been attended with bad
con-

GLACIERS OF SAVOY. 57

consequences, (as we came off unhurt) rather animated than discouraged us, and became at last a matter of amusement; more especially when we thought that our conductor was upon the watch two hundred feet below, and ready to receive us should we slide down so far: this indeed never happened, and we got safe to the crest of the mountain.*

THE fatigues of travellers are not always fully rewarded, but these difficulties over, what beauties were displayed around us! The air upon the summit where we stood was perfectly serene and bright, whilst the valley under us exhibited a very different appearance; it was covered with thick clouds, at this time gilded by the sun, and moving with rapidity on either side of it; and as his power became stronger, we could see them separate, and

E 2

forming

* The inhabitants have since discovered a way less dangerous.

58 JOURNEY TO THE

forming themselves into different fleeces, make their escape by the several openings between the mountains.

If the plain afforded so agreeable and singular a sight, the height in its turn gave us some perceptions altogether new. We had the magnificent prospect of a chain of mountains, equally inaccessible, and covered with ice; and above the rest that of Mount *Blanc*, whose top seemed to reach, and even pierce through the highest region of the clouds. The chain upon which this mountain looks down like a giant, is composed of masses of rocks, which terminate in pikes or spires called the *Needles*; and which are ranged like tents in a camp; their sides appear lighter, and more airy, from the ornament of several hollow breaks and furrows fretted in the rock itself, as well as from the different streaks and panes of ice and snow, which without changing the general character of their form, or the
majesty

GLACIERS OF SAVOY. 59

majesty of their appearance, give them a picturesque agreeable variety. Lower down, the eye surveys with rapture, the gills of ice, and the several Glaciers*, extending almost into the plain, whilst this appears like an artificial garden, embellished with the mixture of a variety of colours. In short, we have a picture † opposite to this chain, which is formed by innumerable mountains at the distance of near fifty leagues, between whose tops we have a glimpse of those several plains which they environ.

E 3

IT

* We counted five. The first situated at the foot of Mount *Blanc*, which they call the *Glacier des Boissons*, or *Boissons*; the second the *Glacier des Pelerins*, or *du plein de l'Aiguille*; the third the *Glacier des Bois*, or *de Montanvert*; the fourth that of *Argentiere*; and the fifth the *Glacier du Tour*; or in the country language *du Tord*; the last of which is distant from the first about five leagues and a half.

† What would it be then could we ascend the summit of Mount *Blanc*?

It was upon this mountain we enjoyed that fine sight, which two months before afforded Mr. *De Saussure* an experimental proof, in one of the most remarkable phænomena of Nature. As the skies began to blacken and threatened a tempest, whilst he was upon its top, he was curious to see the effects of it, and for this he did not wait long; he soon found himself naturally electrified; but apprehensive of danger, at seeing the lightening form itself too near him, he was obliged to hasten quickly under shelter.

WITH respect to ourselves, without any fear at present of the consequences of so terrible a phænomenon, we heard a long continued rumbling noise, like that of thunder, which the silence of the place where we stood rendered still more awful. The *avalanches* of snow, which separated from the tops of the mountains, rolled down, bounding, to the bottom;
con-

GLACIERS OF SAVOY. 61

considerable fragments of the rocks which followed them, overturning others in their fall; massy blocks of ice, consolidated by returning winters, which precipitated from the highest summits; torrents, streams of driven snow reduced to dust, pushed on by the force of the winds, and hurl'd aloft into the air; these together, were the principal causes of the noise which we heard; though we beheld at the same time the effects of a thunder stroke upon our own summit, which had penetrated its surface, and shivered even the pebbles of it.

ACCORDING to the most general estimation, we were in this situation raised near twelve hundred toises above the level of the lake of *Geneva*, which is more than twice the height of *Saleve* *.

E 4

This

* The highest point of *Saleve*, a mountain distant about a league from *Geneva*, is five hundred and twelve toises above the level of the lake.

62 JOURNEY TO THE

This excessive height, and doubtless the neighbourhood of the ice which surrounded us, except on one side †, made us feel the most piercing cold. It was now two of the clock in the afternoon, and our thermometer was only four degrees above 0; we were nevertheless entirely at our ease, and took our repast, which the fatigue we had gone thro', and the purity of the air we breathed, rendered delicious.

It was not without regret we saw the moment arrive, when we must quit this scene; we threw one parting glance over all those magnificent objects; which we never could be tired with surveying. We looked at one another, in expressive silence; our eyes alone could speak what we had seen, and told what passed in
our

† I say, except on one side, because we had summits of ice like that of *Buet* behind us, of which an account will be given hereafter.

GLACIERS OF SAVOY. 63

our hearts; they were affected beyond the power of utterance.

WE now had infinitely more anxiety and trouble in descending, than we had in getting up; perplexed, shaking and trembling at every step, our danger painted itself in all its terrors. We nevertheless came off with some slips; but it was four hours before we arrived at the bottom, though we ran part of the way. It was night when we reached *Prieuré*, where we found the good people of the place had been some time uneasy*, look-

E 5. ing

* They were the more uneasy, as some days before, one of their townsmen had been taken up dead. This poor man, having learned that Mr. Professor *De Saussure*, was expected at *Chamouni*, formed a design of climbing the mountain, with a view of chafing a Chamois, to present him at his arrival; but he had the ill fate to fall from the top of a rock. Mr. *De Saussure*, touched with his misfortune, and the distressed situation of his family, consoled them by his
gene-

64 JOURNEY TO THE

ing out with anxious expectation, and were then just quitting their houses to come to our assistance, apprehensive that we might have met with some unfortunate accident.

generosity, making very considerable presents to the widow and children. I had this account from the inhabitants themselves, who take every opportunity of exalting his generosity and affability of behaviour to them upon all occasions; and such is the respect they bear him, that they never speak of him without taking off their hats.

V A L -

VALLEY of ICE
OF
MONTANVERT.

HAVING taken this general survey of the Glaciers, we determined to spend the rest of our time in examining the construction of each of them particularly, and to begin with the valley of ice called *des Bois*.

For this purpose we ascended *Montanvert*, the mountain opposite to Mount *Bœven*; it is less high, less steep, and more agreeable, being covered with beautiful

66 JOURNEY TO THE

tiful fir trees, many of which we saw had been thrown down by the winds. The northerly winds blow with the utmost violence through the valley in the spring, and the southern winds in autumn; but that which they most dread, is a wind from the East, which pouring through the freights of the mountains, plunges towards their feet, tears up by the roots, or overturns all the trees in its way, and not uncommonly, reverberated by some other mountain which opposes its passage, it returns in eddies, unroofs the houses, and does infinite mischief. We had the good fortune however to experience none of its fury; the air was perfectly calm the whole time we staid at this place, and gave us an opportunity of enjoying in security, the sight of its extraordinary objects.

WE now looked over an entire valley of ice several leagues in length, and a * quarter

* See the Preliminary Discourse, p. xiii.

GLACIERS OF SAVOY. 67

quarter of a league in breadth. At the distance of about three leagues, it divides into two branches, that on the right extends behind the mountains commanded by Mount *Blanc*, and the second turning to the left, goes on towards *Val d' Aoste*.

A SEA violently agitated by a storm, and arrested by a severe sudden frost, might well represent the appearance of this Glacier; the waves, hardened by succeeding winters, are some of them of a dirty, and others of a clear white, divided by oblique fissures, which appear of a transparent blue. The waters murmur as they run along these clefts, several of which are very deep, and new ones frequently are opening; the prelude to these new ones, is a loud bursting noise; and probably the melting away of some parts at the bottom of the Glacier, occasions the cracking upon its surface. This valley is formed by high mountains, which terminate in Spires or Needles, and these
have

68 JOURNEY TO THE

have all different names; one is called *l'Aiguille du Dru*, another *l'Aiguille du Gouté*, a third is called *le Moine*, and a fourth *le Géant*: some of them have the form of obelisks; but the *Dru*, which surpasses them all in height, is a most magnificent pyramid.

At the extremity of this valley, is an Amphitheatre, composed of very lofty mountains, which close it; at the tops of which there is an appearance of a gallery, adorned with several statues, ranged in a sort of symmetry; and it is here that the crystal is generally found, surrounded with a greenish earth or moss; it has not the form of a Die as in *America*, but of a column of six or seven faces, and is always terminated in points.

THERE are rocks, which sometimes breaking off from these *Needles*, tumble after several bounds upon the ice. We saw an *Avalanche* of snow, which was instantly;

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stantly reduced into a cloud by a gulf of wind; and there fall likewise from these mountains, several torrents of water, which form little cascades, the sight of which is exceedingly agreeable. We descended afterwards upon the ice.

THE earth at the edge of this valley *, is white and friable like chalk; they call it, serpentine. It is astonishing at this place, only to *look* at the height of the ice; its waves resemble little mountains, heaped upon one another, some of which are not less than from forty to fifty feet high: it is difficult to make our way over them at first, but in proportion as we advance farther up into the valley, these waves of ice insensibly decrease in height, and become more even. We found here the bones of a poor Chamois, which was brought

* Probably from the form of its strata, or from some resemblance it bears to a species of marble so called.

70 JOURNEY TO THE

brought hither no doubt by an *Avalanche*. The ice seems to encrease every year, and the old people at *Chamouni* assured us, that formerly it was possible to penetrate from the extremity of this valley, even to *Val d' Aoste*, which the vast accumulation of ice has rendered at present impracticable.

THERE are two causes which appeared to us to keep the ice eternally in this valley; its height, and its situation. The soil of the valley of *Chamouni* is about three hundred and forty toises above the level of our lake; this height, join'd to the effect of the mountains covered with snow, which furround it, renders the air very sharp, and the winters long. Its situation nevertheless, from west to east, to eight or nine hours sunshine, every day for several months, and his rays reflected from the mountains, occasion a very considerable heat; but the valley of ice is elevated about three hundred and
fifty

GLACIERS OF SAVOY. 71

fifty toises higher than that of *Chamouni*, whilst its extension from south-east to north-west, and the prodigious mountains it has upon the south side, permit the sun to shine upon it but a few hours in the day, and this only in the height of summer, when he is near the tropic; at which time his rays do but just glide over it.

AFTER having walked upon the ice near two-thirds the breadth of the valley, we contented ourselves at present without going farther, and re-ascended to repose ourselves near a shocking hovel, which our guides called the *Chateau de Montanvert*, of which we took the road to *Prieuré*, with lively impressions of what we had already seen, and an eager desire to penetrate to the extremity of this valley.

T H E

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T H E

GLACIER des PELERINS.

AS it was our design to visit every thing interesting at *Chamouni*, a list we were favoured with by Mr. Professor *De Saussure*, served for our direction; and the *Glacier des Pelerins* was proposed in it, as well worthy of our observation. This being the highest in the chain commanded by Mount *Blanc*, and likewise so near the mountain, that it might even be reckoned a part of its base, we determined to ascend it, and to range from this Glacier along the *Needles*, all the way to *Montanvert*, where having passed the night, we might descend the next morning into the

GLACIERS OF SAVOY. 73

the valley of ice, and penetrate as far as possible.

To execute our design we made choice of four guides, one to conduct us to the *Glacier des Pelerins*, and the other three to go the same day to *Montanvert*, to prepare for our reception, and to accompany us afterwards into the valley; such was the plan we followed. We set out very early the next morning, upon the same side of the valley with Mount *Blanc*, and ascended through a forest of fir trees. In this walk we passed over considerable tracts, where whole woods ravaged and destroyed, painted to us the terrible effects of those *Avalanches*, which frequently roll from the mountains, and particularly in the spring. These *Avalanches* are formed of snow, driven by the winds against the rocks, where the quantity is accumulated, and supported by their ledges and projections, till successively increased, both in extent and depth, to a prodigious size,

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at last they overcharge the base which kept them up, break off by their own weight † and falling with a dreadful crash, thunder down into the valley, carrying every thing with them in their way. There is something very grand, and at the same time frightful, only in the sight of those prodigious falling masses, which the wind, occasioned by the velocity of their motion, renders still more horrid:

It

† There are other causes, both of the accumulation and fall of those vast masses of snow, than what are here given. *Vide Recherches sur les Modifications de l' Atmosphere*, tom. ii. p. 295.

In crossing over the *Alps*, more especially during the spring, the jingling of the bells upon the mules, is frequently sufficient to bring down the *Avalanches*, which in narrow defiles obliges the muleteer to take them off, and march with the utmost silence and caution, under these threatening precipices; or where they are likely to roll beyond the road, and reach the declivity of the mountain, to shake them down by the discharge of a pistol, before he ventures to proceed on his way.

GLACIERS OF SAVOY. 75

It is a torrent that nothing can resist, raising clouds as it were of smoke, and whirling it in vortexes to the skies, which it darkens and even hides; hopeless the poor inhabitants, whose dwellings are too near: they are certain either to be carried down, and crushed with the mass, or buried alive with their families and their cattle. Several of these *Avalanches* still preserve some memorial of the catastrophe they occasioned, as they retain the names of the places they have ruined or overwhelmed; one for instance is called the *Avalanche de la Coudre*, or *des Noisetieres*, and another the *Avalanche des Ingoleros*; the former of which appears to be near a quarter of a league over. It was not till after a walk of four hours, that we at last arrived at the *Glacier des Pelerins*, which is called likewise *Glacier du plein de l'Aiguille*.

THE *Glaciers*, as hath been before observed, are beds of ice, more or less
thick,

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thick, which are lodged upon the gentler declivities between mountains. These beds, increased from time to time, become of a considerable extent and thickness; that upon which we now were, is about six hundred yards in length from top to bottom, and may be fifteen hundred yards in breadth. We crossed over it: it is separated in many places by rifts and clefts, of which there is no discerning the bottom; but upon carefully examining them, the new ice may be readily distinguished from the old: the new is white, and at most not above six feet thick, whereas the old below it, is of a bluish colour. It is necessary to be cautious in walking upon this ice; to strike with your staff before you place your foot, and to set it when it can be done upon the swelling parts, which their convexity in general renders more firm: this attention is necessary likewise, because the clefts are sometimes concealed by fresh snows: but what baffles all precaution, there

GLACIERS OF SAVOY. 77

there seems besides to be a danger from the bursting open of new clefts, which are sometimes made without the least notice to expect them. We were now advancing farther up upon the Glacier, when all at once a rolling noise like thunder under our feet, occasioned us to retire with precipitation the same way we came: but if we had reason to be afraid of what might happen under us, what we saw above our heads did not set our minds altogether at rest: these were the Needles, behind which we heard a fullen rumbling sound, with now and then a sharp redoubled crack; and several rocks thrown down at no great distance from us, were a demonstration of the danger we were in. In our hasty retreat, we found a butterfly dead upon the ice, and saw some *Marmotts*†, which we were upon the point of
of

† The Marmott is an animal of the *Glis*, or Rat kind, about the size of a small hare; it remains in a torpid

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of taking : two Chamois afterwards made their appearance, but at our reproach retired, as if with a reluctant slowness, to the heights of their mountains. We took the same road they did, ascending pretty high; and made no doubt of our arriving in a short time at the foot of the Needles, as Mount *Blanc* did not appear very distant : what a mistake ! we reached them indeed. but not till after a long hour's tiresome and fatiguing walk.

torpid state, like the Dormouse, near the tops of the rocks during winter, and is so benumbed and inactive upon first coming out of its holes, as to be easily caught.

R E G I O N

REGION of the CHAMOIS.

*Laborious walk along the base of the
Needles to MONTANVERT.*

THE view of the Neeedles from their foot, was a most ravishing sight; but when we reflected that from their summits, the plains of the south, the north, and the east were to be discerned; how mortifying to think them inaccessible! a restless inclination did it excite, to attempt at least, to set a foot upon their heads. My mind was strongly agitated; and looking at them with a longing attention, I thought I saw a possibility of doing it: urged forward by this flattering instant hope, I surmounted with deter-

F

mined

80 JOURNEY TO THE

mined resolution every obstacle the rocks opposed in my way, and mounting over the heaps of ruined fragments, I at last attained a ridge of that pike which adjoins to Mount *Blanc*.

THE elevation I had now gained, was most exceedingly delightful; but the prospect differed little from our view upon Mount *Breven*: I was far from being satisfied; I wanted to get rid of that immense rampart, which hid from me the plains toward the south: redoubling then my ardour, I climbed afresh with inexpressible fatigue from rock to rock, and with the caution of a reptile making its way upon some bristly plant, I insinuated along the traces of those ornamental winding crypts, which gave these masses all that lightness we admired from *Breven*; till astonished at the prodigious height I saw myself, and still more with what remained for me to do, I at last discerned the full length of my ability.

BUT

GLACIERS OF SAVOY. 81

BUT I was sufficiently rewarded for my trouble, by the beautiful picture that was before me; higher than the *Breven*, my view extended over the mountain to the west and north; near me, and at my feet, were the valleys of *Chamouni*, of *St. Michael*, of *Serve*, and of *Sallenche*; farther off I discerned the valley which separates the two *Saleves*†, and saw with an affectionate regard, which it is impossible for me to express, those parental plains upon which *Geneva* is seated, its beautiful lake, and in short the whole extent of Mount *Jura*, to the fort of *Ecluse*. On my right were the valleys of the *Pays de Val-lais*, half of which only were discoverable, and that immense chain of the *Alps*, which describing a curve, is terminated at *Fourke*, and Mount *St. Gotthard*.

THE purity and clearness of the air, free from the exhalations of the plain,

F 2

enabled

† Two mountains near Geneva.

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enabled me to see all those objects with such distinctness, and precision, that I conceived it would have been *easy* for me to trace them in a Drawing; but I soon lost myself by this very circumstance; such a number of objects were too much brought together, and crowded under my eyes, so that nothing kept its due distance.

I HAD left my companions at the foot of the *Needles*, and could see the little lake upon whose border we had appointed to rest ourselves; it was impossible to distinguish *them*; but I could hear the report of their gun, which was the signal agreed on.

I WENT down again with much anxiety and labour: the stones, the rocks rolled under my feet, and I dared not trust myself even to some enormous masses which seemed to hang upon nothing. I got safe however at last to the bottom, and soon rejoined my companions in the journey.

GLACIERS OF SAVOY. 83

journey. Seated upon a delightful bank of moss, we took our repast at the border of the lake, whose water is of an intense coldness, and which is almost covered by those threatening *Needles*: one of these in particular drew our attention; it was distinguished and brought forward, by a glazing of the most transparent ice, which added greatly to the effect of an object in itself exceedingly magnificent.*

FROM hence we were to go to *Montanvert*, where according to our plan, we were expected: it was two o'clock before we set off; we had to pass the whole

F 3 chain

* Let any person form to himself, if it be possible, a view of this mountain, of which the front that it presented is as large as that of *Mole*, which looks towards *Geneva*; and whose covering of ice was so perfectly clear, that the foliage of its plants, the veins of the rocks, and their various colours, came out with so much splendor and brilliance, that it might be taken for a work of art, if its immensity did not instantly forbid the supposition.

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chain of the *Needles* over fallen rocks; the road was bad, and never were we so much deceived in the estimation of distances; what appeared to us to be no more than half a league, was always twice as far, and the jutting parts of this chain, whose points shut over one another, threw us into continual errors. It seemed that having reached the point which offered itself immediately before us, we should soon be at the end of our journey; and when encouraged by this hope we attained it, some new projection, not less distant than that we had so resolutely gained, opposed itself to lengthen our fatigue. The views however, at all times most engaging, were both beautiful and sublime: *Above* us, we had the pleasure of seeing a torrent of snow precipitate from a rock; six hundred yards *below* us, was the region of lofty *firs*; four hundred yards *below these*, was that of *Larches*, whilst ourselves were in the region

GLACIERS OF SAVOY. 85

gion of the *Marmotts*, and *Chamois*; very much out of our place, as is evident from the labours and difficulties we experienced, which sometimes almost weighed us down. Perpetually deceived with respect to distances, constantly walking over broken rocks, either ragged or cleft, or edgy, frequently apprehensive of being carried down along with them, or of taking a false step, or of wedging of our foot in the cleft of a rock, (which it is impossible always to be certain of avoiding) and often obliged to run across considerable spaces with the utmost expedition, to escape the danger from *Avalanches*, or the falling of the rock, it was not till after a laborious walk of five hours in this manner, that we met our man, the servant we had engaged to attend us the whole journey. Our joy was reciprocal; he had been at *Montanvert*, and was coming up in search of us. We soon after discovered the valley of ice at the bot-

86 JOURNEY TO THE

tom, and at last the hovel of *Montanvert*, which with *us* had now the merit of the stateliest *Chateau*: it was not however till after three quarters of an hour's walking, that we reached it, though we went down very fast. As it was in this place we were to pass the night; the third companion of our journey waited for us here, with our guides: they had brought us all the necessary provisions; but the sight of this valley of ice, and the extreme coldness of the air, which he was unable to support, determined him to quit the mountain, and return to *Chamouni*. It was not without much concern we saw him leave us, the instant we almost rejoined, and were just going to enjoy the noblest prospects. The guide who had attended us the whole day, went down at the same time; there remained then only my first companion, our domestic servant, three guides, and a shepherd.

WE

GLACIERS OF SAVOY. 37

WE saw with much tranquility the approach of night; the air was calm and serene, and the stars now glittered in the sky, when we set down to our supper. Seated upon the turf, or upon stones near a large fire, we admired the splendor of the heavenly bodies, which in that horizon, bounded and confined by mountains, seemed to glide away with more than ordinary swiftness, and give place to others.

INVITED by so many extraordinary objects to meditation, fatigue alone could at last oblige us take repose. They had prepared a bed for us in the cottage, which was nothing more than a nich in a large stone, the shepherds had inclosed by a wall without mortar, and in this two persons only could shelter themselves from the weather. Our people in the mean time were stretched about the fire, with no other covering than the skies,

88 JOURNEY TO THE

and in some measure better off than ourselves, who were exposed to the piercing severity of the wind, which forced through every crevice of the wall. We were frequently under the necessity of going out to warm ourselves: and in imitation of our guides, presenting sometimes one side to the fire; and sometimes the other; in this manner we waited for the morning.

It appeared, but its appearance was for some time doubtful, because the rays of the sun, which almost instantly enlightened the tops of the mountains, had all the silver paleness of a moon-light; an effect which was occasioned by the whiteness of the snows and ice, whose colour in these places is the predominant tone of every object.

SECOND

SECOND DESCENT

INTO THE

ICEY VALLEY of MONTANVERT,

And extraordinary Passage over it.

WE descended into the valley, about three quarters of an hour after sunrise, when the *English stone*, to which we paid a visit, recalled with much respect the first discoveries of Messrs. *Windbam* and *Pocock*: how inconsiderable, when compared with what we promised ourselves a sight of! yet scarcely had we gained our feet upon the ice, when we found ourselves retarded by the clefts, that opened quite across the valley. We passed a number of them with the utmost
gaiety

90 JOURNEY TO THE

gaiety and spirit; but others soon appeared, it seemed impossible to clear; nor could we even look at them without terror. Our guides accustomed to such objects, ventured over boldly; provided with a staff or pole of seven or eight feet only in length, they sprung with an amazing strength, agility, and resolution, and encouraged, and instructed us to do the same. The farther we advanced, we met with openings wider yet, as well as deeper, and where even our guides were under a necessity of taking every possible precaution. In such cases they generally placed their pole horizontally under the left arm, with the longer part of it extending backward; so that if they should not have sufficient strength to reach the farther side, they stood a chance at least to be suspended by it: one trembles at the idea of such an accident! Happily no misfortune befell us, and we gained the middle of the valley; our exercise

GLACIERS OF SAVOY. 91

ercise rendered us more active, and habit gave us courage, which in truth was necessary every instant.

BUT a chasm we now arrived at, caused us infinite perplexity, its depth was about eighty feet, and we were stopped near half an hour upon the brink, by new difficulties, and the apprehensions of our danger: one of our guides at last, and my companion leaped it; for myself, I dared not follow them, and the want of resolution cost me many a fatiguing round. This difficulty happily surmounted, we flattered ourselves the worst was over, when all at once we were again surprised with mounds of broken ice, and chasms, of which we could scarce discern the bottom: we climbed however, not without great difficulty, to the top of one of these confused heaps, never once suspecting what it led to. It looked into a void of a prodigious depth, which seemed to sever this from all the other masses.

We

92 JOURNEY TO THE

We stood motionless, to find the situation we were in, and what hazards we must risque to pass it : never was presence of mind more necessary ; we threw our eyes in silence over all the objects near us ; we measured their extent, remarked their shapes, their prominencies, and the grasp they could afford us ; every advantage was considered, and at length by strict attention, we discerned a hole, as if it had been digged into the ice, appearing like the entrance of a mine that had been worked ; and as we perceived an outlet on the other side, it raised our spirits. There was danger still, in trusting to so frail an arch, for such a distance, which might upon the slightest shock, or even upon the slightest noise, sink in at bottom, or break down above and crush us : we drew ourselves however gently through it, and by means of this precaution passed it safe †.

WE.

† The author is not so clear in his account of this Pass.

GLACIERS OF SAVOY. 93

WE now were soon to see an end of these alarming hazards, and of our excessive labour. Arriving near the fall of rocks upon the ice, we employed ourselves in search of crystals; all these rocks are filled with such productions: and we could discern the beds, or broken caverns they are formed in, at the summits of the mountains. The farther we advanced, the more we saw of objects to admire; yet surrounded by these beauties, we could not but reflect with horror, at the sight of this eternal frozen lake, its yawning clefts, and deep abysses; whilst the mountains that environed us, whose antiquity impressed a reverential kind of awe, the gradation of their sloping sides, which sometimes ended in a headlong precipice, the variety of their stupendous rugged forms, together with those piles of ice, and rocky fragments, which broken

ken

Pals, as might be expected from his general accuracy of description,

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whole of this enchanting view was terminated with the rocks of crystal, and by others, all whose several tints were richly and profusely varied.

New beauties still continued to delight us, astonished as we were at present, by a number of objects so magnificent and vast.

THE valley on our right was ornamented with prodigious Glaciers, that shooting up to an immeasurable height between the mountains, blend their colours with the skies, which they appear to reach. The gradual rise of *one* of them, induced us to conceive it practicable to ascend it; and such is the engrossing nature of these objects, that they seem to efface every other idea. We are no longer our own masters; and it is next to an impossibility to stop the impulse of our inclinations.—It would open still new scenes,
of

GLACIERS OF SAVOY. 97

of more extensive grandeur.—That as we *certainly* should gain a view behind the Needles, such a point of elevation, (beyond which, no mortal whatever had yet gone) would not only present Mount *Blanc*, to us under a new form, and with new beauties, but that in short, looking towards the south, we should have a picture of all *Italy* as well as in a Camera Obscura. It was thus the wildness of imagination prompted us to think the project possible, and we were in the full enjoyment of our reverie,, when a horrid noise from the very same Glaciers put an end to this delightful dream, and shattered the scenery at once. Reason dictated immediately, that supposing such a fancied picture as we had represented to ourselves, to be real, and that it *were* possible to ascend the height of the Glacier to enjoy a sight of it, the execution of the plan, would require our stay all night upon this frozen valley, which was absolutely

ly

98 JOURNEY TO THE

ly impossible, from the want of fuel only.

By this time rest was necessary to us; and the only situation where we could be safe, was in the middle of the valley; we might here at least be out of danger from the falling down of ice or rocks. The station of Mr. *De Saussure* appeared most eligible for our purpose, and we were coming to the very spot: it is a massy block of stone, precisely at the middle of the ice; we seated ourselves upon it, and having taken out our necessary refreshments, poured a sparkling libation to the honour of the Professor, as the first person who had resolution enough to penetrate thus far.

WE rested here two hours; our minds voluptuously employed in the contemplation of so many wonders; every moment was distinguished with some new discovery. A single glance over all these Glaciers

GLACIERS OF SAVOY. 99

ciers together, seemed to throw a light upon their correspondence and extent, and I ventured to conjecture that the first Glacier in the valley upon the right hand, might end at the Glacier of *Pelerins*, and the second at that of *Bossons*. That the Glacier *le Talefre*, over the valley on the left hand, joined to a Glacier like this we were upon, extending from thence to the Glaciers of *Argentiere* and *Tour*, and then stretching as it were its arms to the valleys of ice, in the *Pays de Vallais*; as those again have some connection with the Glaciers of the Canton of *Berne*, and the rest of the Glaciers in *Switzerland*.

FROM such conjectures, which the situation of these Glaciers renders highly probable, it seems to follow, that the antientest and most considerable of them, are those commanded by Mount *Blanc*; that those of *Vallais*, and the other still more distant, are to be considered as making up a regular train; and that farther, this relative

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relative position of them with respect to each other, indicates the *cause* of the progression, and of the accretion of the

It was now high time to quit the place; we looked at all its wonders with astonishment and admiration: we were not doubtless for the last time; for not with the beauties of this country and others, to be visited again with ease. Inclination prompts us: but if our journey at this point was not accomplished without labour and fatigue, the grandeur of the objects we had seen, made us satisfaction. We had taken every possible advantage of our journey; the weather had continually favoured us; it is at one season of the year only, that an enterprize can possibly be undertaken.

We instantly set off again upon our journey, re-entered the valley of *Moutier*, and walked a tolerable pace; the clouds we saw approaching hastened

GLACIERS OF SAVOY. 101

still more; it was not long before they thickened, so that they from time to time entirely hid the sun; and a sudden return from this gloom to the most dazzling light upon the ice, could not but endanger the due placing of our feet. As we approached *Montanvert*, we began to see upon the mountains which surrounded us, some verdant spots, which gave refreshment to our eyes: in these places are produced those medicinal plants, so valuable for their properties, and their scarceness, which grow there only, or in such like situations. My fellow traveller, who is an eager Botanist, was very desirous of finding that particular species of *Absynthium*, called *Genepi*; for this purpose he ascended one of these mountains, and had the good fortune to meet with it. There are several species of this plant, more or less common; that he sought for, was the white, a plant particularly agreeable to the taste of the wild *Goats* and *Chamois*, which they

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they generally are obliged to dig for through the snow.

WE saw none of the latter animals in this excursion, but we met with several goats, which they drive to pasture in the mountains, and graze there for about six weeks; leaving them without a keeper, and visiting them not above once in ten or twelve days: there are herds likewise of cows, which they leave to themselves for the same length of time, at the end of which they are driven to fresh pastures. The herds have no other enemies to fear in these places but *Tempests* and *Avalanches*, or other such like common accidents of the mountains: it is highly agreeable, and even astonishing, to see the great as well as small cattle, cross the valley of ice, leaping its clefts, climbing over rocks, making their way along the hanging steeps, and walking upon ridges one would hardly think accessible: the most venturous of them indeed sometimes lose their

GLACIERS OF SAVOY. 103

their lives through their rashness; but in this case the loss does not fall upon the particular owner, but upon the public; in other words, it is distributed amongst the general proprietors, and every owner in a herd where such a misfortune happens, bears his share of it.

To avoid that Abyss in our return, which we had passed with so much hazard, it was necessary to draw towards the side of the mountains in good time, to keep on, close to their feet, and now and then to ascend the ridges, to avoid some beds of ice, or fragments of rocks, that opposed our passage, and it was with infinite fatigue we made our way to *Montanvert*.

ONE reflection naturally occurs: All these labours, and sometimes dangers, it may be said, are too discouraging, if they do not even banish every inclination to penetrate to the extremity of the valley.

I ANSWER; it is true that we experienced much fatigue, as well as many hazards, but that it is practicable to effect it, and yet avoid a considerable part both of the one and of the other.

FOR this purpose, I would recommend it to such as have no aversion to a little trouble, not to get upon the Glacier immediately at *Montanvert*, but to go as far as possible from this place, before they descend upon the ice; to cross the breadth of the valley directly from thence, and to coast along the mountains on the left hand, as they did upon the right before they came down to the Glacier. This route, which is chosen by the herds, and which on that account alone I should be disposed to think the safest, conducts the traveller at a distance from those deep clefts we were under a necessity of passing, by having descended into the valley too soon. Those who are afraid of rocks,
and

GLACIERS OF SAVOY. 105

and not accustomed to the fatigue of such a laborious walk, may charge their guide with a small bridge made of osiers, which may be doubled, to render it still more firm ; by means of this, the passage may be considerably shortened, and rendered at the same time safer, as well as less fatiguing. It would be desirable, if possible, to avoid lodging upon *Montanvert*, as the cold which must be endured there, certainly weakens us. Lying then at *Chamouni*, and setting out three hours before day, the traveller might get to *Montanvert* by five o'clock; a good breakfast would renew his strength; he might then descend upon the ice, go over the whole extent that we did, and return again to *Montanvert* by broad day-light, from which place he may get down to *Chamouni* in two hours. And after all, what are these inconveniencies and a little trouble, compared with the pleasure arising from a survey of objects, so amazingly beautiful, and where vastness and sublimity reign

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throughout the whole. To be satisfied with a simple view of this valley, as we see it from *Montanvert*, one must either entertain a very poor idea of the beauties of these places, of their nature, and their elegance, or be destitute of that Taste which is requisite to the enjoyment of them, or under the mortifying incapacity of gratifying it, from a weakness of constitution.

THE same day we descended the mountain, and arrived at *Prieuré* just as our third companion returned thither, who had been to visit the source of the *Arve*. Good provisions and rest perfectly recovered us. We devoted however the next day solely to visiting the source of the lesser *Arve*, called the *Arveron*, which is situated at the foot of the Glacier of *Montanvert*, and not more than a league distant from *Prieuré*; so that it appears we rather were disposed to indulge ourselves, like people who had suffered some fatigue.

COL-

COLLECTION OF MASS OF ICE
called DES BOIS,

A M D.

Source of the ARVERON.

TO come at this collected mass of ice, we crossed the *Arve*, and travelling in a tolerable road, passed some villages or hamlets, whose inhabitants behaved with much politeness; they invited us to go in and rest ourselves, apologized for our reception, and offered us a taste of their honey.

AFTER amusing ourselves some time amongst them, we resumed our road, and entered a beautiful wood of lofty firs, inhabited by squirrels; the bottom is a fine

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sand, left there by the inundations of the *Arveron*: It is a very agreeable walk, and exhibits some extraordinary appearances.

IN proportion as we advanced into this wood, we observed the objects gradually to vanish from our sight; surprized at this circumstance, we were earnest to discover the cause; and our eyes fought in vain for satisfaction, till having passed through it, the charm ceased. Judge of our astonishment, when we saw before us an enormous mass of ice, twenty times as large as the front of our cathedral of *St. Peter*, and so constructed, that we have only to change our situation, to make it resemble whatever we please. It is a magnificent palace, cased over with the purest crystal; a majestic temple, ornamented with a portico, and columns of several shapes and colours: It has the appearance of a fortress, flanked with towers and bastions to the right and left; and at bottom is a grotto, terminating in a dome
of

of bold construction. This fairy dwelling, this enchanted residence, or cave of *Fancy*, is the source of the *Arveron*, and of the gold which is found in the *Arve*: And if we add to all this rich variety, the ringing tinkling sound of water dropping from its sides, with the glittering refraction of the solar rays, whilst tints of the most lively green, or blue, or yellow, or violet, have the effect of different compartments, in the several divisions of the grotto, the whole is so theatrically splendid, so compleatly picturesque, so beyond imagination great and beautiful, that I can easily believe the art of man has never yet produced, nor ever will produce, a building so grand in its construction, or so varied in its ornaments.

DESIROUS of surveying every side of this mass, we crossed the river about four hundred yards from its source; and mounting upon the rocks and ice, approached the vault; but whilst we were attentively

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employed in viewing all its parts, astonished at the sportiveness of Fancy, we cast our eyes at one considerable member of the pile above us, which was unaccountably supported; it seemed to hold by almost nothing; our imprudence was too evident, and we hastened to retreat: yet scarcely had we stepped back thirty paces, before it broke off all at once, with a prodigious noise, and tumbled, rolling to the very spot where we were standing just before. It was a most fortunate determination, since if we had staid an instant longer, it would certainly have crushed us by its fall.

THERE have been much reasoning and debate, about the causes that produce these heaps of ice. But being for the most part seated at the bottom of the Glaciers, (of which, if I may use the expression, they seem to lay the first foundations) it is probable that they are formed originally by an over-fall of snow, which

GLACIERS OF SAVOY.

which being heaped together by degrees, becomes in a succession of winters, a considerable mass of ice; and such collections are augmented, either by the causes which at first produced them, or by the continued rolling down of snows and ice, which come from higher Glaciers.

THE water of the *Arveron*, which runs out of this mass, is excellent, and though as cold as ice itself, there is no reason to be afraid of drinking it, even when one is very hot; and this is a general excellence of all those waters, which come from ice, when they are drank at the source.

WE took up several handfulls of sand, to see if we could find any gold in it, but there was none; it is not however less certain, that there is gold, and gold of great purity too, in the bed of this stream; some persons from *Geneva*, who

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carried away several bags of its sand, returned a second time; but the orders since received upon this occasion, have hindered any farther search †. The inhabitants of *Chamouni* are carefully persuaded they have a Mine of this metal, affirming that there are indubitable signs of it, though these are frequently effaced by changes, owing to the melting of the snows. They have also some *Marcafites*, the traces of which, in like manner, are very soon destroyed; they nevertheless sometimes discover them, and they offered us a considerable vein of this stone, (or metal, which-ever it be) but their expectations were raised too high, for our acceptance of the offer.

† Artificial Riches are neither abundantly possessed in this country, nor the general object of mens wishes. They live, says the ingenious Rousseau, to *enjoy Life*, and not to acquire wealth and excite envy: If ever they have more money they will grow *poor*; and of this they are so sensible, that they tread upon mines of Gold, which they are determined never to open.

M A J E S T I C

GLACIERS OF SAVOY. 113

MAJESTIC WALLS of ICE,

A N D

GLACIER des BOSSONS.

A Prospect of the Glaciers is so very entertaining, that notwithstanding we had seen that of *Pelerins*, we were still desirous of visiting that of *Bossons*, which is the first we discern at our entrance into the valley of *Chamouni*. To come at it, we took the same road by which we entered, and passing by several habitations of the peasants, we stopped at one of them, to observe a young Chamois returning from the pasture with the goats; they had taken it very young, at the foot of
the

164 JOURNEY TO THE

the Needles, and brought it up with the herd; its horns were just beginning to bud, its head was fine, its eyes full of fire, and every movement witnessed agility and strength. Providence seems to have formed this animal with such a peculiar love of liberty, that it is hardly possible to confine it long; when it is once sufficiently strong, it constantly endeavours to escape into the crags of the rocks, and almost all the young ones they have taken, with a view of bringing them up tame, have made their escape, so soon as they were strong enough to get away. The manner of taking them is singular; when the hunter has killed a female Chamois that suckles, he sets it upon its legs again, as if it was still living, and concealing himself under the belly of the dead Chamois, waits with patience till the kid returns to its dam; he then seizes the little struggling animal, and conveys it home.

SETTING

SETTING off again, we took the road across some meadows, and over several beds of stones, collected by the violence of the torrents; when passing by the Glacier, already visited, we soon began to mount, ascending through the midst of woods. It was not till after walking a good league, upon a pretty steep slope, that we obtained a view of those amazing walls and buttresses, by which the Glacier is supported. They are solid masses of ice, which rise up perpendicularly, like the walls of a prodigious citadel, built with strong towers, that seem to be from about three to four hundred feet high. The upper parts of these enormous towers, are transparent, in the same manner, and for the same reason, that the ends of our fingers appear so, when opposed to a strong light; we particularly admired a hole of an oval form, pierced through the wall, at an almost equal distance from each end of the range, towards the
top,

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top, through which the sky appears; and the sun at a certain time of the day, having his rays collected by it as a *speculum*, darts them in a bundle to the very bottom of the valley. Our road lay directly under this icy wall, but the apprehension of danger, in being exposed to the fall of fragments from so brittle a fabric, made us draw more towards the right; we again therefore entered into the woods, and ascending as before, found ourselves at last upon the Glacier.

THIS Glacier, though less elevated, and less considerable than that *des Pelerins*, is nevertheless exceedingly worthy of curiosity, and we advanced upon the ice, which is sufficiently difficult to get over, being in some places almost mountainous.

HAVING reached the height of the Glacier, we had a view of the whole valley of *Chamouni*, which presents itself here in most agreeable perspective; a prospect

GLACIERS OF SAVOY. 117

prospect of the other Glaciers, and heaps of ice, that of the rivers which run from them; the little islands which they form; the cultivated fields; the tender verdure of the meadows; the contrast of the dark green of the firs, with the yellow colour of the woods of larch trees; all these different objects, which terminated this vast field of ice, from which we saw them, formed together one of the most singular picturesque landscapes we had ever beheld: Above us we admired afresh the majesty of Mount *Blanc*, and could better judge from this, than from any other point of view we had yet come at, of its immense height, and of the absolute impossibility of ascending to its summit.

HAVING crossed to the other side of the Glacier, we kindled a fire, and sat down to dinner; immediately after which we hastened to descend through the woods, to escape a violent shower and tempest, which

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which seemed to advance upon us very fast. We were overtaken, notwithstanding all our expedition, but saved a part of the distress, by sheltering ourselves a while at the first house of the nearest village.

THE rain now seeming to be over, we took advantage of the weather, and instantly set out again; but we were stopped near the border of a torrent, whose channel is generally dry. This torrent, which came from the foot of the Needles, was so considerable, that it was rather rash for us to think of passing through: we nevertheless determined to attempt it, but we had not gone on far, when a person eagerly called out to us to return as fast as possible; in fact, we saw such a considerable body of water coming down, and with so much impetuosity, that we should probably have been overwhelmed by it; an accident which sometimes happens to those who are not unacquainted.

GLACIERS OF SAVOY. 119

quainted with the passage ; for the swelling is often so sudden, that it does not give time even for the crossing it; it falls again indeed as suddenly, and we passed it a few minutes after. Its waters are so muddy, as to be almost black. The rain having again caught us, we were well soaked when we got to *Pricuré*, where the body of the tempest threatened to discharge itself. The flashes of lightning, with the bursts and rolling of the thunder, were almost without intermission, and we were apprehensive of some dreadful consequences. The Prior and Vicar were at prayers in the church-porch, and the sound of the bells *, mixed with the storm and the thunder, had a grand effect.

SUCH

* It is usual in Popish countries, to ring the bells of their churches, during a tempest, which by virtue of their baptismal consecration, are supposed to have a power of dispersing it.

SUCH were the interesting objects which we saw in the valley of *Chamonni*, and upon our route. We may be bold to say, that except Mr. *De Saussure*, no person has yet visited so many places in this country, or advanced so far into them; I should nevertheless think my present set of Views defective, if I omitted to take a Drawing of the magnificent chain of *Needles*, and of Mount *Blanc*, seen from the Glacier of *Buet*, as it is described by Mr. *De Luc*, the height of which no person before him ever ascended. As I purpose visiting the mountain of *Sixt*, which supports this Glacier, with an intention of offering my Designs from it to the public, I presume I shall give no offence, if in this place I premise Mr. *De Luc*'s own interesting narrative of its discovery, printed in his elegant work, † *Recherche*

† It is much to be wished this excellent work were translated into English.

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cherche des Modifications de l'Atmosphere; more especially as it is not in the power of every ingenious person to obtain a sight of it. I at first intended only a very short abridgment of his journey, but as this would be depriving my readers of a considerable deal of pleasure from the perusal of it, in his simple, unaffected, and yet striking manner of describing every object and occurrence, I shall retrench as little of the Narrative as possible; a detail of his experiments only upon the weight of the air*, which were the principal

* Having rendered the Barometer as complete as possible in its construction, one great end proposed by Mr. *De Luc* at present, was to confirm his method of determining the precise point upon any Thermometer, of whatever construction, at which water boils, when the Barometer stands at twenty-seven inches.

During the course of these experiments, the ingenious Author has observed, that boiling water never exceeds a certain degree of heat, under the same state of

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cipal motives of this very learned and ingenious Philosopher for ascending to the summit of the mountain.

of the air at the same height, and that its variations upon a change of that state, follow in a harmonic progression, whilst the corresponding heights of the Mercury in the Barometer, are taken in arithmetical.

T H E

T H E
GLACIER of BUEY.

Journey of Monsieur DE LUC.

MR *De Luc* having many times gone over that part of the *Alps* (which is nearest to *Geneva*) in the Barony of *Faucigny*, had observed many summits much higher than the *Canigou*†, but he notwithstanding despaired of finding any that were proper for his experiments, the accessible parts of this portion of the chain being all too low, and the summits offering nothing

† A mountain in the neighbourhood of *Geneva*, upon which Mr. *De Luc* had already made some barometrical observations and experiments.

thing to his view but pikes in the form of obelisks, the more sloping sides of which are cased with ice. But he had remarked out of this chain, and not so far from *Geneva*, a mountain whose summit, although always covered with ice, appeared to him accessible. It may be seen from the western bank of the lake, near *Geneva*, between those of *Mole* and *Voirons*, but yet at a considerable distance.

He endeavoured then to inform himself of the name of this mountain, the place where it was situated, the road necessary to be taken to arrive at it, and whether or not it was to be ascended; but no person could be found that knew it, nor could he gain the least intelligence with respect to any of his questions: He was obliged therefore at all events to take a Journey in search of it, and endeavour to find it himself.

HAVING

HAVING mentioned this design to his brother, he consulted with him which road was best to pursue, and engaging his assistance in the excursion, they set out from *Geneva* together upon the 24th of August, 1765, directing their route by *St. Joir*; but upon their approach to this town, they lost sight of the mountain they were in search of, though it was at this time clear, that it was necessary to gain the valley of *Taninge*, and they discovered it in fact at the bottom of that valley, as soon as they entered it; when stopping to examine it attentively with glasses, they were now confirmed in the opinion that it was accessible, even to its summit, and by that very side too which fronted them.

BUT what errors does not distance occasion? that which appears the most inaccessible when we are far distant, affords sometimes the easiest ascent; whilst we are frequently stopt short in those places
where.

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where we could foresee no difficulty at all; even at *Taninge* they still judged their project easy, but the nearer they approached the mountain, the steeper it appeared; in the mean time they had no idea of the kind of difficulty which stopt them in the end.

As they approached the town of *Samoing*, they observed the icy summit of the mountain (which was properly the object of their journey) lower by degrees with respect to a certain line of rocks, which had till then appeared to be a part of it; and beyond *Samoing*, their mountain was concealed by one nearer to them, which it was necessary to get round: Night approached; at the same time the road became more difficult; and they were much embarrassed, when they fortunately overtook a peasant travelling the same way; he informed them that the village of *Sixt* was at the bottom of the mountain, and that he was going thither himself. They fol-

GLACIERS OF SAVOY. 127

Followed him; and after having crossed by *Vallon*, a village situated in a delightful plain, they entered into a defile, which conducted them along the banks of the *Giffre*, to the village of *Sixt*, where they arrived at night, after walking eleven hours.

REFRESHMENT and repose were highly requisite; and their guide gave them no hopes of finding any accommodation, but at the Abbey, the Canons of which are Lords of the place; but the Convent was now shut. Emboldened however by necessity, they had the good luck to make themselves heard, laid open their distress, and were received with all imaginable hospitality.

WHILST their supper was preparing, these gentlemen had the politeness to send

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for

• This river has its rise in the very mountain to which they were going.

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for several persons of the village, who were acquainted with the mountain. But the pastures (as they call them) being no more than half way up, they could say nothing concerning the summit our travellers were so desirous of visiting; one of these people only offered to conduct them to the highest granges of the mountain, where they possibly might find a shepherd better able to direct them. It was determined then to set out with this person the next morning for the discovery; and their generous Hosts supplied them with provisions necessary for the expedition.

THE hamlet they were to go to, is called *les Granges des Communes*; it is a string of huts ranged in the direction of the slope upon the mountain, under a little rock; these huts consist only of an inclosure of stones placed one upon another, without mortar, to the height of about three feet; whose roofs are covered with shingles, or flat pieces of deal, shaped
like

GLACIERS OF SAVOY. 129

like tiles; the ridge of these roofs is in the same direction with the line of the huts, which are so low, there is no standing upright under them, but in the middle; and in these, inconvenient habitations, the peasants of *Sixt* come to pass the time, an interval indeed of no great length, whilst the pastures are free from snow. In fact, it would be but a useless trouble for them to bestow more care in their construction, since in spite of the connection with each other, and the order of their arrangement, which contribute to support them, and notwithstanding the protection of the little rock which covers them on that side next the mountain, they are very often crushed by the fall of an *Avalanche*; and this must equally happen, were they built with ever so much cost.

THESE pastures are overlooked by rugged precipices, formed out of the ruins of the upper part of the mountain;

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and their craggy slopes, with the rocks, which command them, form a perpendicular height of more than three thousand French feet, for a prodigious extent along its side; almost all this steep surface is covered with snow, which is accumulated by the winds: when the depth of the snow is not considerable, it gradually melts away, without rolling down in masses; but during the winter season 1769 and 1770, there fell such a prodigious quantity of snow, that the mass could no longer be held up, and its parts being contracted by the long severity of the frost, and rendered less tenacious, it tumbled all at once upon these pastures, which it entirely covered, and its extremity reached the slope beyond the plain. The effect of the air, pressed by this *Avalanche* of snow, was so terrible, that the hurricane occasioned by it forced itself a passage through a forest of beeches and firs, which covered the slope, and did not leave a tree standing in its way; it even

GLACIERS OF SAVOY. 131

ven stopped the course of the *Giffre*, (which flows along the valley) and overturned on the opposite bank, a number of trees and granges, much stronger than those, which remained crushed by the *Avalanche* upon the *Pastures des Communes*.

As they were to ascend the very rocks over which this *Avalanche* came, it may easily be conceived how steep and rugged a road they necessarily had to pass; it must be difficult to secure their feet, where even the snow failed of a support. The very first appearance of these rocks, upon their arrival at the *Granges des Communes*, pointed out the necessity of their placing an entire confidence in their new guide, since they were absolutely to be directed by his judgment: He joined them, and they now began the enterprize.

BUT what gave them the most uneasiness was, that they had entirely lost

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fight of that frozen summit, the object of their journey. Their guide, who, though an inhabitant of the mountain, had never climbed these rocks, pretended it was still higher; and that when they were once beyond them, they should soon arrive at the ice. Committing themselves therefore to his conduct, they continued mounting for near four hours, by passages, in which they were often obliged to help themselves up with their hands, and frequently to use great precaution if they wanted only to turn their heads to look back. An impatience however to discover what these rocks concealed, still urging them to get the better of these obstacles, they arrived at last at their top; but what was their surprise and chagrin, when they perceived themselves upon the brink of one of the most frightful precipices*, which separated them from

* The Line of Rocks they were upon, is called *Grenier des Communes*, and this is likewise covered
with

GLACIERS OF SAVOY. 133

from the summit they came in search of.

THEY stood motionless a considerable time, with admiration as well as horror. Mount *Blanc*, appeared before them in all its majesty: this, without saying too much, is the very expression it naturally inspires; even the precipice which stood before them was majestic. Let any one figure to himself a steep of more than three thousand seven hundred French feet, encompassed round with pointed rocks, and upon which every step they set, it seemed as if the next would carry them down into the air beyond its edge, and the very idea will be enough to make him shudder; and yet the sight having dwelt a while upon these frightful naked pikes, was soon relieved, and felt an agreeable repose at their feet. Rich smiling pastures,

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fur-

with a Line of smaller Rocks, the highest of which is called *Grenairon*, or the little *Grenier*.

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surrounded by woods, with here and there a scattered grange, softened the horror of their situation, whilst the most solemn silence was interrupted only by the dashing of cascades from rock to rock; the lowing of the herds could not reach them.

As soon as they could disengage their attention from objects so new to them, though not unacquainted with mountains, they showed their guide the summit they were desirous of getting to, but it was now too late; half the day was already spent; and though it appeared to them, that by only turning the precipice on the left hand, they might arrive at it, the journey was too long and hazardous for the remainder of the time; and as they were hindered from pursuing the intended plan the next day, by an accident which happened to their thermometer in climbing the rocks of *Grenier*, they now returned back again to *Geneva*.

† It was not till the year 1770, that they again entertained hopes of accomplishing their design, when they set out upon the 24th of August, and arrived the same evening at the Abbey, where they were received with a double warmth of civility by their friendly Canons: the conversation soon turned upon the disappointment of their former journey, and they were earnest to prevent the same disagreeable event a second time; but as the Chamois-hunters are generally employed at this season about getting in their harvest, our travellers were under the necessity of taking up with such guides as they had before. Leaving the Abbey therefore at four the next morning, they reached the *Pastures des Communes* about six, where a young man at the grange belong-

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ing.

† From the beginning of this paragraph to page 143, is added from Mr. *De Luc's* Narrative, printed in his *Recherche des Modifications de l'Atmosphère*.

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ing to the Canons, an apprentice to a hunter, joined the guide who came with them, and promised to conduct them to the ice. The way he led them was over several slopes of frozen snow, till he brought them to the middle of the range of *Grenier*, at which place the rock is so prodigiously steep, that it was astonishing any person should have the hardiness to think of climbing it; but the hopes that it would lead them to the icy summit they were in search of, and the desire of completing their experiments, conquered every difficulty. They mounted from one jutting point to another, up the clefts of an immense wall of stone, which was almost perpendicular; and after infinite difficulties, which were increased by their humanity to a little dog that followed them from the Abbey-grange, whom in pity to his cries, they were frequently obliged to hand from one to the other, they had the mortification to find themselves at last on the very same precipice
they

GLACIERS OF SAVOY. 137

they had been at in their journey five years before. Giving up therefore their expectations of attaining the height they wished to come at, after picking up several beautiful impressions of the *Cornua Ammonis*, at two thousand seven hundred and eighty-two English yards above the level of the *Mediterranean*, they determined to rest satisfied with making their experiments, upon the summit of *Grenairon*. This rock, which crowns the ridge of rocks they had ascended, is separated in several places by large openings and fissures, several of which were yet filled with snow, whilst in others it consists of rugged pikes, whose rough projecting points were the means of their ascent; it was every where difficult: and their guides were so intimidated at one pass, that they refused to follow them *: this was no discouragement

* A friend who came with them from *Geneva* had been obliged to desist, and go down again, before they had attained the ridge of *Grenier*.

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ment to these Gentlemen ; they surmounted it, and shame prevented the return of their conductors, they followed and attained the summit.

BUT here an accident befel them, which had like to have been fatal: the young man, who had conducted them from the grange, fatigued with the labour he had undergone, and in a fit of laughter at the folly of taking all this trouble to boil a little water, threw himself unluckily with all his weight upon Mr. De Luc's foot, who was stretched at his length upon the rock, attending the fire for their experiments; the care of these prevented his attention to the hurt for some time; but no sooner had he finished his observations, than upon rising up, he found it impossible for him to support himself, and he was ready to faint with pain: all hopes of reaching the summit were now at an end; but this was the least of their misfortune.

GLACIERS OF SAVOY. 139

fortune; it was necessary to go down again: he remained several hours incapable of supporting the very idea of it, till necessity at last got the better of every thing. It was impossible for them to continue where they were all night; bad weather might come on; the wind, the cold, the rain, and the clouds, might expose them to every kind of evil; it was absolutely necessary to quit a region so liable to storms; he dragged himself along therefore, by the assistance of his brother and one of the guides, (for the author of the misfortune had abandoned them*, to go down and milk his cows) descending about fifteen hundred perpendicular feet, the greater part of which way he was obliged to slide upon his back, not being capable of setting his foot to the ground.

Night

* Mr. *De Luc* very candidly imputes this behaviour to the man's mistaken duty to his Master, rather than to want of feeling for his distress.

Night came on; they were at the most difficult part of the descent, and it was determined upon consultation to go down no farther, but to remain at this height, though the situation of the place did not afford the least shelter, and was surrounded on every side with snow. Mr. *De Luc*'s spirits were exhausted, and he had long been wishing his companions to stop, though he had not confidence to propose it, from the dangers they must be exposed to in sleeping so near the clouds; but every limb had now tired in its turn; he was quite worn down, and moreover suffered inexpressible anguish: all that could be done was to make a barricade of fragments, to prevent their rolling down the steep, should they change their situation during sleep, and to cover their legs, which were most sensible of cold, with the table-cloth that wrapped up their provisions. The night most fortunately proved calm and fine, and the fatigue they had undergone procured them repose for
some

GLACIERS OF SAVOY. 141

some hours; but they were awakened by the severity of the cold, and there was no walking to procure themselves warmth: the day was never so long in coming, and the night seemed never to have an end. They set out again at day-break, as benumbed as Marmotts, and it was some time before they could recover the use of their limbs: happily the repose he had enjoyed, considerably lessened Mr. *De Luc*'s pain, the foot indeed was blown up, but he could stand upon it, and descended to the *Granges des Communes* with very little assistance, where they rested some hours, and arrived at *Sixt* about noon.

As this day happened to be a festival, the inhabitants of the neighbouring villages were assembled to hear Mass. The sight of strangers coming from the mountains, and the instruments, drawing their attention, all concluded they were come in search.

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search of Mines†; it was for some time to little purpose to explain the nature of their experiments; they smiled in answer to them, that they knew better; some few of the more intelligent however at last understood them, and upon their pointing to the Icey summit, they now first learned, that the Mountain they had made two fruitless expeditions in search of, was the Glacier of *Buet*; the same persons likewise mentioned the hunters who were capable

† Satisfied with little more than the *natural* advantages of Society, which are truly Blessings, this happy People look upon the introduction of new arts with an eye of jealousy, as tending to destroy Contentment, by increasing mens imaginary wants; but they dread the vain discovery of those hidden treasures, which have ruined every country they are found in, and have rendered social life an evil to a large proportion of mankind in general,

Aurum irreperitum (ut sic melius situm

Quum terra celat) spernere fortior

Quam cogere humanos musus

Omne sacrum rapiente Dextrâ.

GLACIERS OF SAVOY. 143

pable of conducting them to it, and in about a month after, they had the satisfaction of meeting with one who had been at the foot of this very Glacier, in pursuit of a wounded Chamois.

THE route which they took at last was by *Granges des Fonds*, a hamlet situated at the bottom of that frightful precipice they had surveyed from the edge of those Rocks above the pastures *des Communes**. Setting out then from the abbey of *Sixt*, at two o'clock in the afternoon, they ascended all the way through roads which gradually prepared them for the grandest, the wildest, and the most romantic prospect that can be imagined, without the least mixture of horror to disturb the contemplation of its various beauties. The eye was never satisfied with looking at the different views which offered in their route: the path they followed was
across.

across the middle of the hill, through a narrow valley shadowed upon either side with forests of firs and beech trees; whose dark masses, separated here and there by rocks, and pastures glittering in the sun, formed a most agreeable opposition to each other, whilst different sheets of water pouring from the heights of the mountain, collected in a torrent at the bottom of the valley, now and then appeared, but was more frequently concealed by interwoven boughs, and foliage projecting over on each side, or by the rocks under which it is precipitated; and these picturesque views were continually varied, from the winding contour of the valley which they followed.

THE soil of *Fonds*, is extended almost horizontally towards the rocks which well nigh environ it, but falls away with a sudden slope on the side of the valley, by which it is approached; and this hanging steep as we ascend, like the curtain of
a for-

a fortified town, hides the place entirely. Within a few paces of the top of this rampart, we perceive nothing ; but after taking five or six steps more, the view enlarges all at once, and opens into the most superb amphitheatre, discovering all those beautiful pastures which are surrounded by it. The air was clear when Mr. *De Luc* and his brother gained this delightful plain ; it was half an hour after four o'clock, and the sun still enlightened one part of the romantic solitude. It is impossible to express the emotions which they felt at this view ; they could not cease admiring it, with mutually repeated recognitions of its beauties. They were here near the highest grange of *Fonds*, a thousand eight hundred and sixty-six French feet *above* the Abbey ; and four thousand two hundred and thirty-six *below* the summit of *Grenairon*, which commands one side of this amphitheatre, whilst the opposite side is crowned by the Glacier of *Buet*, which is elevated

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ted upwards of a thousand feet high. The eye takes in the whole of extent, nor could any opening of sweeping girdle be discerned, except above the tops of those declining walls through which they had ascended.

THE remainder of the day was employed in walking over, and contemplating this beautiful retirement; enquiring their guide of all those extraordinary objects which presented themselves around them; above all, the history of the people inhabiting these mountains interested extremely: it is a corner of the world little known, though well worthy the enquiries of a philosopher. We may discern the real wants of man, the use of all his necessary cares, and how the force of habit is capable of effecting but above all, how sweet that calmness of mind, when the soul is in the human nature only; unanxious about idle sensations, and removed from the solicitude

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of artful life, they tread that streight and even path which she herself has pointed out to them, beyond the labyrinths of society, and unseduced by its corruptions.

THESE people have their troubles it is true, because they are men; but they neither anticipate them by restless desires, nor aggravate them by reflection; they hope, because they expect every thing from the Author of Nature; and a steady firmness of resignation (that laboured effort of stoic philosophy) is here the natural effect of their *Belief*; a full persuasion, that the evils they experience, are dispensed to them, by the very same hand, which bountifully dispenses every blessing*.

THE

* Notwithstanding the rocks of this country appear to be steep and absolutely inaccessible, an attentive survey of them will discover a number of projections, which Nature, who neglects nothing, has covered with verdure; and no sooner is the snow melted, than these
these

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THE coldness of the evening having obliged these gentlemen to retire, they took possession of a cabin which its owner had not come to occupy, what a lodging for the natives of a city! It was rather a cage than a house, consisting of the bodies

these mountaineers who are acquainted with the passages that lead to them, conduct thither their flock with the lambs that have been dropped during the winter. Each parish has a mark to know their own, and they leave them there in common; the feed is much higher flavoured than in the valleys, and the sheep continue upon these ledges of pasture, till they are covered with snow, when they return of their own accord to their respective hamlets. They count but little of the lambs that were not fallen before the flocks were driven into these places, not that they have any thing to fear from bears and wolves, against which the precipices are a sufficient protection; but precipices are no protection to these animals against the Eagles, of which there are very large ones amongst the rocks; Mr. D. Luc saw some the next day, hovering and watching for the Marmots; and the guide assured him, he had found a feather of the black eagle two feet and a half in length.

GLACIERS OF SAVOY. 149

of fir trees, rough and unhewn, placed horizontally across each other at right angles, and covered with flat pieces of the same wood; these huts are in general not more than five feet high, to the top of the roof; so that it is impossible to stand upright in them; the intervals between the trunks of the firs let in a sufficient quantity of light, and it is by these openings, and by those of the roof, that the smoke escapes when they make a fire. The door of these cabins is never locked, though the furniture of them is not removed, and our travellers found here the seats, the table, and the couch of the owners: they lighted a fire, supped, and prepared their bed, which was of boards roughly hewn, fixed up near the roof, and covered with dried leaves; some practice is required to get into it, and the lodger ought by no means to walk in his sleep.

BEFORE

150 JOURNEY TO THE

* BEFORE they went to rest they consulted the Barometer ; it was fallen since their arrival ; so that notwithstanding the sky was yet clear, they were not without uneasy apprehensions about the weather. They could have slept here with less inconvenience from the cold, than they had reason to imagine, but were most wretchedly tormented with fleas ; which though undoubtedly they did not spare their friend the mountaineer, appeared to give no sort of interruption to the soundness of his repose. They closed their eyes however about midnight, but were presently awakened by the pattering of a heavy shower upon their roof ; the thunder soon was heard to roll amongst the rocks ; the winds blew hollow ; and the fall of rain, increased the pouring and dashing of cascades ; in short the lowing of the cattle, with the
piercing

* From this paragraph to the 154th page, is added from the original Narrative.

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piercing screams of women calling up their straggling cows, whose voices were re-echoed from the mountains, all together formed such a confused, dismal noise, as by no means tended to compose their spirits.

THEY could lie no longer ; they got up, rekindled their fire, and sat down before it, eagerly wishing for the approach of morning. The Barometer was still falling ; but when day appeared, the rain* was over ; the sky was not entirely covered,
I vered,

* It may give the reader an idea of the rich covering of these pastures, that notwithstanding the vast quantity of rain which fell, some peasants who continued all night upon the mountain to attend a sick cow, had been absolutely sheltered from it under the spreading branches of a large fir tree ; they kindled a fire at its foot during the tempest, and laid them down to sleep with the utmost tranquility ; it was not long before the fire reached the trunk, and they gave themselves as usual no trouble in extinguishing it. Not far distant from this place, there stood another most magnificent
fir,

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vered, yet the wind blew strong at South,
and drove some heavy clouds above their
heads, whilst others rising from the valley,
rolled

fir, of about twelve feet in girth, under which Mr. *De Luc* and his brother happened to take shelter the following afternoon; the former ill requited tree continued burning, but was undermined on that side next the steep, when after boiling the water at it for their experiments, they rolled it flaming down the precipice. A mountaineer makes no sort of ceremony about burning down a tree to warm himself, and in these situations there is little danger of the fire's being communicated from one to another. As these gentlemen were looking out of their hut the next night, they were entertained with the sudden appearance of a bright sparkling flame, rising up upon a neighbouring eminence, in the form of a pyramid: it was an old fir tree set on fire upon a like occasion, whose pendant ragged moss, and withered branches, were instantly in a blaze. It must have been a fine object by itself, amidst the darkness; but the gleam of yellow light it threw upon the overhanging rocks above, and upon the tops of woods below it, the partial distant gleams upon the cattle, with the glittering of cascades, give us an idea of the
sweetest

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rolled along to the foot of the rocks, and sometimes filled the area of the pastures.

IN this state of the weather it was impracticable to ascend the Glacier; and to go back to *Sixt* would be losing the whole day, should it afterwards prove fine. It cleared up about noon, yet continuing still to rain at intervals, they resolved to pass another night upon the mountain; but this too proving stormy, and the Barometer not rising, they went down again to the Abbey with chagrin. The next morning their friends prevailed with them to stay yet *one* night longer; they engaged it would be fair, and never was the barometer so little consulted; it rose however in the afternoon of the day following, and the same evening they returned to *Fonds*.

I 2

THEY

sweetest solemn night-piece in nature; and might furnish a companion to that bright expanded moon-light at the conclusion of the eighth book of the *Iliad*.

THEY now scarcely slept a wink all night, the pleasure of looking at the stars which promised a fine day, kept them waking, and often times allured them out of the hut. They could not wait for the morning to begin their journey; it delayed their satisfactions too long, and they hastened to ascend the mountain, with that pleasure which is always doubly relished after difficulties. Proposing to make several different experiments, at a considerable height before they reached the summit of the mountain, the Plain de *Lechaud* (where they arrived at seven o'clock), was the place appointed for these observations. It is a beautiful pasture, abandoned wholly to the Chamois, from the impossibility of getting up either cows or sheep, besides that this part of the mountain being far above the forests, it would be too difficult to build lodges, or procure wood to burn.

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No sooner had they gained this plain; than they saw three of its native Burghers, who had nothing to fear from them, their guide being unprovided with his gun*, a

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circum-

* The Chamois-hunters gun is of a very peculiar construction, it consists of a single-rifled barrel with two locks, one before the other, and receives two charges of powder and ball at the same time, the bullet of the first charge being either screwed down, or rammed so tight, as to serve for a breech-pin to the second charge, and prevent the communication of the fire to it, upon pulling down the cock nearest the muzzle. The difficulty of pursuing these animals over the heights of the mountains, renders it necessary to have the piece as light as possible, consistent with the advantage of a double charge.

The Chamois seems to hold a middle place between the goat and the deer, and to exceed in strength and agility together, almost every other animal of its size: it is astonishing to see with what swiftness they bound along the steepest slopes upon the edge of precipices, to escape pursuit: but its swiftness is its chief security, for there are but few places, over which the Chamois is capable of going, where an expert hunter is not capable

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circumstance, which though regretted by the hunter, rather heightened the pleasure of fight to these gentlemen, as the history of the persecutions those poor animals suffer, with which their guide was often entertaining them, had strongly moved their pity and compassion. After having rested

pable of following. These hunters always carry with them a pocket telescope, and having gained a superior eminence, run over the most elevated pastures with their glass to find the game, which they endeavour to come upon unawares, but the least noise is sufficient to give the animal an alarm, when it flies with a prodigious swiftness; the skill and address of the hunter is then shown in driving it upon such narrow ledges, as lay the timid creature under the necessity either of leaping down a precipice, or of presenting itself trembling before him: it sometimes indeed in such a situation turns short on a sudden, and endeavours to dart past him; in which case the hunter himself is in no little danger of being precipitated down the steep, if he has not time to slip aside, or cling close to the rock.

The Chamois remains in sight of the hunter but not after it has passed him, its resolution does
 life.

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rested no more than three quarters of an hour, in the highest part of this pasture, they again continued their walk. The road was always entertaining from the variety of its plants, its soil, and its appearance; though in all these, there was nothing perfectly new to them: but after having left the plain *de Lechaud*, a very little way behind, a number of circumstances conspired at the same time to excite the most agreeable sensations.

THE sun now rose upon them in its splendour; the air was calm, and of a serenity unknown below, upon the plain; and they advanced so sensibly, as to perceive the effect of every step upon the surrounding objects: having climbed an eminence which stood wholly by itself, the nearest objects seemed to sink under their feet, and they were continually discovering new ones, scene behind scene, in almost endless perspective; whilst a mixture of the strongest brightest lights, with

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large masses of shade which were softened here and there, by the interposal of a thin light vapour, wonderfully separated every part of this changeable progressive picture*. They had now been walking more
than

* As the sun was now but very little elevated above the Horizon, the long extension of the shadows undoubtedly contributed beyond every other advantage to preserve the *Keeping*, in this boundless prospect; whereas in Mr. *Bourrit's* view from one of the Needles, the shadows must have been comparatively short, the sun being then not far from the Meridian, and the Air, at the same time was perfectly free from the least haziness. See page 81.

It has long been observed, that it is impossible to paint the brightness of Noon, from an imperfection in the colours of the pallet; but besides this defect in the *materials* of imitation, Nature herself with all that glare about her, is not so well understood; we are deceived in distances, because every thing is brought forward, and crowds upon the eye; and thus we see things separate which are joined, or connected which really are separate; it is a *Principle* therefore in copying nature that a prospect over a large tract of country, especially from an extraordinary eminence, can
never

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than three hours in a very fatiguing road ; notwithstanding which, whether it was owing to the satisfaction of attaining their end, and in so favourable a moment ; or the pleasure of extending their prospect every instant ; or to a physical effect of the purity of the air they breathed, or all together, they felt such an ardour in the attempt as nothing could restrain.

THEY enjoyed for two hours, this sensible succession of new objects without any other inconvenience than that of walking

I 5 up

never have a good effect, though taken with the *utmost* exactness, when the sun is high. The shadows of objects may be as broad, and even sometimes broader at noon, than either in the morning or evening, but the shadows at this time being short, confine the effects almost to their respective particulars ; whereas a length as well as breadth of shadow separates the groups better, and stretches across the piece so as to distinguish and throw off the several different *Grounds*.

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up an exceeding steep slope; which was nothing to their spirits and resolution. But their situation was soon changed; unforeseen difficulties occurred, and the ravishing delight they so unexpectedly enjoyed, was to be amply paid for.

CON-

CONCLUSION

OF THE

Journey to the GLACIER of BUET.

THUS far Mr. *De Luc* and his brother had ascended by the South side of the mountain, either upon a steep Down, or over sloping ridges of small stones strewn with those minute plants which grow for the most part, only upon such eminences. This front not being very broad, they could discover to the West, the whole space between them, and the
Jura;

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Jura; and to the East one part of the chain of the *Alps*, whose pikes rose gradually into view, in proportion as our travellers advanced in height; but turning now towards the western front, upon which the mountain is much more extensive, it entirely barred from them the prospect on the side of the *Alps*, and they were so much employed upon the road itself, as never once to think of looking behind them.

THEY soon began to approach the snow, and after that the ice at the foot of the Glacier of *Buet*; which is said to take up the whole summit of this mountain. It was at this time covered with snow; that which had fallen in the preceding winter not having been entirely melted, during summer; and there were still some remains of the new. The surface of this snow was very hard, as it had frozen all the preceding night, and the sun had not yet shined upon it. They had foreseen the

the

GLACIERS OF SAVOY. 163

the difficulty arising from this circumstance, and to guard against it, were provided with thick woollen socks† to put over their shoes, by means of which, and their staves pointed with iron, they presumed it possible to step with the utmost security.

THIS invention was applauded for some time, and they ascended firmly, without sliding, up a very rising slope: but it became at last so extremely steep, that all at once their feet slipped from under them, and without the assistance of the pointed staff, which forced itself into the crust of ice, and kept them up, they inevitably must have been precipitated headlong, to the *Granges des Fonds*. The space they had to pass upon the snow, in the front of this precipice, was in fact
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† They had before experienced the inconvenience of cramps fastened to the shoes, which were apt to turn upon the foot, and deceive them.

of a considerable width, and as the slope of the declivity became successively less steep, there was no sort of danger in it, with a very little presence of mind.

NOTWITHSTANDING this, they could not have been able even now, to reach the summit, without their guide, their shoes being absolutely improper for such an undertaking; whereas the Mountaineer, with soles of a prodigious thickness, and at the same time filled with nails, drove the sides of his shoes into the snow every step he set, as he went up assant, and these impressions upon the frozen crust which secured his own feet, formed a kind of stairs, by which our Travellers with the support of their staves were enabled to follow him. But this circumstance which answered very well as they ascended, would have been of no service to them in coming down again, and they dared not to have run the hazard of proceeding, if they had not been fully persuaded

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suaded that the sun in turning to the westward, would soften the surface of the snow, upon that side of the mountain: satisfied by this reflection, that they might descend again with safety, their minds were perfectly at ease, and they gave themselves entirely up to those sensations which the nature of the place impressed upon them.

It is hardly possible for words in any degree to explain what they felt, much less to excite emotions equal to their feelings, and it would be folly to presume they could convey precise ideas of them to the Reader: Not a sound was heard to interrupt the universal silence——no *reasoning* was required, to prove these heights were never made to be inhabited. Their guide was equally a stranger to them with our travellers; the Chamois never come there; and of consequence no hunter ever climbed so high. They are not however
ab-

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absolutely destitute of life, as numbers of those little flies the Naturalists call *Tipulas*, were seen, and some few bees; but the latter animals were now dead; these flying about the neighbouring rocks, to regale upon the flowers of *Genepi*; are frequently surpris'd by storms, which hurrying them up the Glacier, they must perish almost instantly. .

THEIR sentiments upon this profound solitude, are in the number of those it is easy to communicate to others; but these by no means can convey a full idea of their situation. They found themselves upon an immense extent of polished snow, the purity, and whiteness of which, was no where sullied. The rays of the sun which now began to shine upon it, reflected from the snow directly opposite, gave them an opportunity of seeing how its polish was in part brought on, and this gradual dissolution of its surface must extend it in succession to the whole.

THEY.

THEY saw no other objects than the Heavens and this snow; the latter of which was rounded off in such delightful easy swelling volumes where they met each other, as perfectly to resemble those fleecy silver clouds, supported in a serene sky, whose majestic precipices the imagination wanders over with so much pleasure; their situation here appeared to them the same, as the ideas it excited were entirely similar. They seemed suspended in the air, upon one of those majestic clouds; and what air! never had they till then, beheld it of such a colour; it was of a lively, yet at the same time a deep blue, producing a kind of *sensation* of Immen- sity, it is impossible to explain. This deep full colour of the sky, was doubt- less owing to the extraordinary purity of the air itself, as well as the thinness of that medium of vapours, (in comparison of their density upon the plains) which
in-

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interposed between their eyes and the obscurity and darkness of infinite space. At the lower part of our Atmosphere, the colour of the air is always rendered more or less faint, from the great quantity of vapours floating in it, though they certainly contribute to disperse the light, with more advantage. The sky in general appears to us of a very pale blue, it becomes the deeper sometimes as the air is clearer, but it never even approaches to that lively, strong, full colour, in which these gentlemen now saw it.

It was almost noon, when they attained at length the summit of the Glacier, and raising all at once their heads above the ridge of that curtain which had long concealed from them the eastern part of the horizon, they instantly discovered the immense chain of the *Alps*, to an extent of at least fifty leagues; towards whatever point they turned their eyes, the horizon was covered with mountains.

The

GLACIERS OF SAVOY. 169

The boundary of their sight to the West was doubtless nothing, but the thickness of the air itself; for they were so much raised above the chain of *Jura* at thirteen or fourteen leagues distance, as to have discerned the plains of *Franche Comté* and of *Burgundy* beyond it, if the air had been sufficiently clear. Their prospect to the South-west extended as far as Mount *Cenis*, and upon the North-east probably to *St. Gotbard*: in short, they commanded in a manner at one view, all the streights of the *Alps*, of whose pikes there were but few which raised their points above them.

IN all this vast extent of country, covered with mountains upon mountains, they could perceive no plain, but in a little corner to the West, in the middle of which stands *Geneva*: to the *North-East*, they could discern almost from one end to the other, that large valley through which the *Rhone* passes, from its source, as far

as *Sion*, the capital of *Valais*, distant from the place where they stood, about ten leagues: all the rest of the prospect was rough with mountains, every part of which, and much more the whole together, might have excited the admiration of the most indifferent person. One single cast of the eye, over that immense quantity of ice and snow which covers the *Alps*, would amply satisfy a spectator about the continual flow of the *Rhone*, the *Rhine*, the *Po*, and the *Danube*: it is here these rivers have their reservoir, and it might suffice for many years of drought: they compared (for there wanted no calculation) these streams with their sources: the *Rhone*, in all the whole of that extent which they discovered, appeared but as a little brook, upon account of its distance; and yet an equal distance, did not lessen their immense idea of the Mass of ice, from which it flowed. Nearer and not more than a league from this mountain, they discerned the sources

GLACIERS OF SAVOY. 171

of the *Arve*, which unites itself to the *Rhone* below *Geneva*. These streams appeared to them no more than slender *threads* of water, when compared to the valleys loaded with ice, from whence they flow. Mount *Blanc*, which raises itself amidst those vallies, *alone* seemed capable of furnishing for a long time the course of a river; so much was it loaded with ice, the whole of that amazing extent, from its summit * down to the very base.

THIS side of the horizon, offered a most sensible image of winter; it recalled all the ideas which voyagers have given us of *Spitzberg* and *Nova Zembla*: in a word, it presented to their eyes, nothing but enormous heaps of ice, terminating in bare frozen pikes or obelisks, from three to four thousand feet in height; whilst the rest of the mountains, every where displayed

* They have found that its height is four thousand six hundred and eighty three English yards above the *Lake of Geneva*.

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played a variety of productions according to their different soils, and at the very feet of these mishapen heaps of ice, they beheld pastures and harvests.

AFTER having some time carried their attention to every object round them, it returned with strength upon themselves, when they found that they were standing upon a mass of congealed snow, which jutted over a most frightful precipice. The first effect of this discovery, was a precipitate retreat : but soon reflecting that the addition of their weight to this prodigious frozen mass, which had been supported thus for ages, could have no effect to bring it down, they laid aside their fears, and went again upon that horrid terrace. The mountain was as steep on this side as upon the side of *Fonds*, and the projection of the ice carried them so far over the precipice, that if a cord had been let down from the point where they stood, it would have taken upwards of a hundred and seventy

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seventy English yards, to approach the nearest of those pikes with which this side of the mountain is jagged; and the sight would have met with no interruption, till it reached the valley, whose depth was probably not less than seventeen hundred yards below them.

THE crust of ice in those parts where they were capable of distinguishing its dimensions, (which were considerably beneath them) was at the least full sixty feet in thickness; and bordered with more or less projection, all that side of the summit of the mountain, the whole front of which likewise for a very considerable extent was covered over with ice.

WHAT a sight for the inhabitants of the plain!—They reflected upon it with a mixture of astonishment and horror, and held each other by their cloaths, as they advanced their heads to look beyond the precipice. Each of these gentlemen,
perfectly

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perfectly at ease for himself, wanted that security for the safety of his brother. Either would have trembled at the least step he saw his companion take without him—and this mutual apprehension, made them both retire from the brink of the precipice, sooner than either of them would have thought of doing it, had he been alone.

THEY were never tired of considering that astonishing mountain Mount *Blanc*, at the distance of about three leagues; the crust of ice which entirely covers it, from its base in the valley of *Chamouni*, to its summit, resembles in some places a tempestuous sea; in others one may fancy the remains of antique towers, and castles, split and mouldering into ruins; in others, it projects beyond the points and sides of pikes and precipices, where a tolerable judgment may be formed of its amazing thickness, which appeared
to

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to be not less than from five to six hundred feet.

HAVING made two experiments upon the summit of the Glacier of *Buet*, where they could continue only three quarters of an hour, they went down again to make another, near some little rock, from whence as they ascended they had broken several flakes of slate *, of which the height of this mountain seems to be composed. They found in the cracks of these rocks, several collections of *Quartz* of singular forms; and a small bed, or matrix, of very pure rock chrystal. They judged from the position of these rocks, about two hundred feet below the highest elevation of the ice, that they were part of the true summit of the mountain, and that all which rose above them, was only a mass of frozen snow in the form of a truncated cone, two hundred feet in altitude, whose

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broad

* To support the feet of their stove upon the snow.

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broad base seated upon an immense extent of permanent ice, covers the whole declivity of the summit *

THEY call this ice *permanent*, not because they apprehend the very same ice always remains there, for besides the considerable quantity that is melted by the heat of the summer, there is a continual dissolution of it below, which is as great or even greater in the Winter season, owing to the internal heat † of the earth; but they call it

* Monsieur *Bouguer*, one of the French academicians who accompanied *Don Antonio de Ulloa*, into South America, has observed, that the snow invariably becomes permanent, even upon those mountains of the *Andes*, which are situated in the midst of the torrid zone, at the height of 2434, toises, or 5172 English yards above the level of the South Sea; so that a just estimate of their several heights, may be formed by inspection only, as below the line of this cap, the snow is liable to be melted every day.

† The extraordinary intenseness of the cold in Winter, not only upon the frozen cap of the mountain,

but

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it *permanent* on account of its being renewed every year by the snow from above, and it increases not less in thickness, than it does in extent. The melting underneath not being at all times equally performed, over the *whole* of the inferior surface, it must sometimes happen, that a large part of this mass wanting the support of the rock, breaks and tumbles all at once; and it is to this sinking in, with the enormous weight above, that they attribute those openings so prodigious in their depth, their width, and their extent, which we see upon some Glaciers, and which are made with such a horrid thundering crash when they settle down to fill up these vacuities.

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but upon its sides, may probably condense a larger quantity of vapours rising from the internal parts of it, which escape during the Summer, through innumerable pores.

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THERE can be no doubt of the increase of *all* the *Glaciers* of the *Alps*: their present existence is a proof that in preceding ages, the quantity of snow which fell during the winters, much exceeded the quantity melted in the summers; and not only the same cause subsists, but moreover, the excess of cold occasioned by those heaps of ice already formed, will contribute to increase it more, the consequence of which must be a greater fall of snow still, during the succeeding winters, and a less dissolution of it.

THEY observed a very sensible effect of this last cause in comparing the mountain of the *Glacier* of *Buet*, with that of *Grenairon*; this latter offers on the side of *Fonds*, a face of the same form, and equally exposed as the eastern side of the mountain of the *Glacier* of *Buet*: but that of *Grenairon* is entirely without ice, and even clothed with verdure upon the jutting

GLACIERS OF SAVOY. 179

ting parts of it, whereas the other is almost wholly covered with ice; the reason of which appears to be, that *Buet* is immediately fronting the Glaciers of *Chamonix*, and Mount *Blanc*, and that *Grenairon* is defended from their influence. There can be no doubt then, but that as the Glaciers have continued to increase, they must still go on, in an increasing progression, and that consequently Mount *Blanc*, which may be called a distinct Glacier, must sensibly heighten.

THEY were very easy and comfortable near those little rocks to which they had descended; where there was less cold, and less wind; but they were surprized at not having perceived any difference in the density of the air, but by their instruments only; that no inconvenience or disagreeable sensations, should have warned them, that what they now breathed, was near one third less dense, than that of the plains; and that the weight

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of the atmosphere had diminished an hundred quintals upon the body, without the equilibrium being disturbed within *.

WHAT

* Mr. *De Luc* observes in this place how much naturalists and Physicians are deceived, in attributing the alterations many persons experience upon the falling of the Barometer, to a difference either in the weight or density of the air, assigning as a cause the failure of an equilibrium between the external and internal air, or a difference of motion in the heart and lungs, occasioned by the air's being more or less dense. For if these changes could so sensibly affect our organs, what would become of those Chamois-hunters, who pass every day from the bottom of the vallies to the summits of the highest mountains? What would become of the women of the hamlets by *Sixt*, who go up to *Fonds* every night in the summer season to milk their cows, and leaving the cattle to the care of their children, go down again every morning to assist the honest fellows their husbands, in the cultivation of the lands? Those people, in the space of a few hours only experience the greatest variation in the weight of the air, than happens in any one place at a considerable distance of time; for the difference in the height of the Barometer at *Sixt* and *Fonds*, is about twenty-two lines,

WHAT a wonderful machine is this! which accommodates itself to such extraordinary changes even in the very *causes* of its *principal* movements, without which, all its irregularity would be at an end.

AFTER having continued an hour and a half, near these little rocks they began to descend; the sun had softened the snow as they expected, and they went down the steepest slopes, without difficulty, by a very agreeable method their guide pointed out to them; they jumped upon their heels, which sunk into the snow deep enough to support them: it was undoubtedly necessary to observe a regularity, and due libration in these jumps, that the bo-

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lines, from which they perceive not the least inconvenience; even asthmatic persons find none, and it is necessary therefore to have recourse to some other cause, which ordinarily accompanies the variations of the Barometer, to account for the alterations in our health, and particularly in our strength, from which few people perhaps upon such occasions are entirely exempted.

dy might always follow the precise movement of the legs without which, they would have been in danger of falling either backward or forward ; however with this caution, it answered very well, and they dared not venture to attempt another of coming down, which they saw practised by their guide, with much more ease, as well as expedition. It was not an eligible situation in which to try experiments of this sort. He seated himself upon the end of his staff, which he passed between his legs, and driving his heels more or less into the snow, he skated, if I may so call it, to the bottom, with what degree of swiftness he thought proper, of which he was absolute master : he would sometimes suffer himself to go with prodigious rapidity, and then by plunging his heels gradually deeper, and deeper, would stop himself with all the ease imaginable *.

As

* It is common, we are told, for those peasants who have the care of the roads in the *Alps*, to slide down
in

GLACIERS OF SAVOY. 183

As soon as they had passed the snow,
and turning towards the side of the plain

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de

in this manner upon their snow spades: and that it is a very agreeable sight, to see ten, or a dozen of them, upon a summons following one another down a steep mountain, with an amazing velocity; avoiding the precipices, which they run almost to the edge of, by a smart stroke of their heel, that gives a new direction to the motion of their body; just as an expert skaiter makes his way by the very edge of a broken sheet of ice, without the least apprehension of going beyond it.

But the manner of descending the precipices of the Cordilliers, with the sagacity of the mules, as it is related in *Don Antonio de Ulloa's Voyage to South America*, is beyond measure astonishing. On one side are steep eminences, and on the other frightful abysses; and as these generally follow the direction of the mountain, the road, instead of lying in a level, forms two or three steep eminences and declivities, in the distance of three or four hundred yards. The mules are sensible of the caution requisite in these descents, for coming to the top of an eminence, they make a stand; and having placed their fore feet close together, as in a posture of stopping themselves, they bring their hinder feet together likewise, a little forward, as if going to lie down. In this attitude, having as it were taken a

survey

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de Léchaud, began to discover the herbage, they heard from different quarters several shrill

survey of the road, they slide down with the swiftness of a meteor. All the rider has to do, is to keep himself fast in the saddle, without checking the beast; for the least motion, is sufficient to disorder the equilibrium of the mule, in which case they must both unavoidably perish. The address of these creatures is here truly wonderful; for in this rapid motion, when they seem to have lost all government of themselves, they follow the several windings of the road as exactly as if they had before accurately reconnoitred it, and previously settled in their minds what route they were to pursue, and taken every precaution for their safety amidst so many irregularities. There would indeed otherwise be no possibility of travelling over such places, where the safety of the rider depends entirely on the experience and address of his beast. But the longest practice of travelling these roads, cannot entirely free the animals from a kind of dread or horror which appears when they arrive at the top of a steep declivity. They stop, without being checked by the rider; should he spur them on, they continue immovable; nor will they stir from the place, till they have put themselves into the above-mentioned posture. They seem at these moments to be actuated even by Reason; they not only
attentively

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shrill sounds like the blasts of a whistle, which had they been in a wood upon the plains, they should have taken for the signals of Banditti, and have been afraid of falling into the hands of robbers: but in this place, how much soever they alarmed others, they were under no alarms themselves: these sounds being only signals of the

attentively view the road, but tremble and snort at the danger; which if the rider be not accustomed to, these emotions cannot fail of inspiring him with terrible ideas. The Indians go before, and place themselves along the sides of the mountain, holding by the roots of trees, to animate the beasts with shouts, till they at once start down the declivity. It is really wonderful to consider these mules, after having overcome the first emotions of their fear, and they are going to slide down the declivity, with what precision they stretch out their fore legs, that by preserving the equilibrium they may not fall on one side, and yet at a proper distance make that gentle inclination with their bodies, necessary to follow the several windings of the road, and lastly, their address in stopping themselves at the end of their impetuous career.

ULLOA'S VOYAGE, Book v. c. 1.

the *Marmotts*, who perceived them first, to give their comrades notice : when they soon beheld the frightened creatures hurrying away as fast as possible from every quarter, to conceal themselves in their holes ; and the same music was frequently repeated, while they were traversing the region of this animal. They got down to the plain *de Léchaud*, at half an hour after three o'clock, set out again at half an hour after four, and by six arrived at *Fonds*. They rested here not quite an hour, choosing rather to lengthen their fatigue, than not reach the Abbey the same day, and notwithstanding the woods they had to pass excluded every ray of light remaining in the sky, and they could follow their guide only by the sound of his shoes, they got thither at half an hour after eight o'clock, without the least accident, where they were received as usual, with that generous hospitality and kindness, the seasonableness of which they had already experienced. A good night's repose, and
the

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the satisfaction of having compleated cheir design, made amends for all the fatigues they had undergone; they fet off the next day from *Sixt*, affected with the sense of the goodness of their hosts, laid that evening at *St. Joire*, and returned the next day to *Gèneva*, by noon.

THOUGH experiments upon the heat of boiling water, at different heights, were the principal design of Mr. *De Luc* and his brother in this journey, it is so entertaining and agreeable in itself, that they should not have regretted undertaking it, merely from curiosity. It is true that the particulars they had before observed in the environs of the valley of *Chamouni*, greatly augmented the pleasure of which they received from the view the *Alps*, when they were upon the *Glacier* of *Buet*, and it is to those who have already contemplated the heights which surround this valley, who have surveyed them with pleasure upon the spot, that they

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they would by all means recommend this *last* journey; which they have endeavoured to render more easy by a detail of particulars, the principal of which are as follow.

FROM the Abbey to the *Glacier of Buet*, is certainly a very laborious journey, but it is by no means a dangerous one, to those who are capable of supporting fatigue any considerable time, and of looking down from great heights without dread. As the traveller ascends, from *Fonds* to the plain *de Léchaud*, there is a perpendicular steep where their guide proposed to them two roads, one of which is farther round but safe, the other considerably shorter, but which they would not advise every one to take. Impatience, it is true, and only their impatience made these gentlemen prefer it: and the traveller may choose the former, which is not in any part of it the least dangerous.

It

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It is adviseable for those who think they are capable of undertaking this journey, to provide themselves with such shoes as the mountainers of these places wear; they are not only necessary to walk upon the hard snow, but also very convenient in supporting the traveller upon the steep turf: shoes without nails soon become so smooth and polished, that he slips almost every step, if he does not help himself with his hands.

THIS journey ought to be made in the month of August, the days are then longer, and the weather more settled than in that of September, and the people of this country are less engaged with their harvest. It is moreover highly proper to be at *Sixt* upon a Sunday by the hour of Mass, to be more certain of meeting with some one of the hunters for a guide. Setting out from *Geneva*, on the Saturday morning, the traveller may without in-

con-

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convenience get to *Samion* that night, where he may lay in his provisions: and in short, upon the Sunday he must settle every thing at *Sixt*, so as to be able to lie the same night at *Fonds*.

MR. DE LUC concludes these directions for the journey to the summit of the *Glacier*, with a wish they may prevail upon his readers to undertake it. The mountain of *Buet* seems to be the most engaging to a man of Taste of all the mountains of the *Alps*, and he should be sorry, that so many beauties should have no admirers but themselves.

Departure

Departure from CHAMOUNI,

A N D

Return by VALLAIS.

AFTER having rested two whole days at *Prieuré*, we prepared in earnest for our return: The road by which we came, would have saved us two days walking, but we preferred going through the *Pays de Vallais*; and accordingly took that route. In following the course of the *Arve* to get out of the valley of *Chamouni*, we passed by its third parish called *Argentiere*, which is said to have taken this appellation from a silver mine found near it. We saw likewise the *Glacier*,

cier, to which this village gives its name ; it is cut like the lining of a bastion, and the prospect it affords is the more striking, as it runs up between large woods of fir-trees, which are admirably opposed to the whiteness, the clearness and the varied colours of the ice. Those who enter *Chamouni*, from the *Pays de Vallais*, are exceedingly surprized upon their arrival, because this road not having gradually prepared them for the striking effects of the ice and *Glaciers*, (as when we enter on the opposite side,) the very first step they set into the valley, unexpectedly presents the front of this *Glacier*, which may be about twelve hundred feet in its extent from top to bottom. But to us, who had ascended those which were much higher, who had walked eight or nine leagues upon the ice, and who were just returned from seeing the very extremities of the icy vallies we have described, those immense *Glaciers*, whose summits seemed to reach into the sky, and
 who

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who had enjoyed the magnificent prospect of the *Glacier* of *Talefre*, over against *Val d'Aoste*, to us this view of the *Glacier* of *Argentiere*, afforded nothing very remarkable, or to be compared with what we had already seen. More distant we discovered likewise that of *Tour*, which descends like a cascade down a spacious valley of ice: it differs from other *Glaciers* in the form of its frozen waves, or beds of ice, which are rounded off more like regular globes, so that when seen from a distance, and the sun happens to shine upon it, there are a thousand suns reflected instead of one. The valley crowned by this *Glacier*, is a collection of mountains of ice, piled one upon another, and is not to be ascended; its very aspect which is frightful, gives us an idea of *Spitzberg* and *Nova Zembla*, and the falls of ice are too frequent to admit even a near approach to it; the thundering down of these fragments, is heard several leagues off, and such is the violence
of

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of their shock, that *Valorfine* hath been frequently alarmed with the concussion. In the mean time, it is remarkable, that the space between this valley horrid with broken mountains of ice. and *Val d'Aoste*, which partakes of the fine climate, and the fertility of *Italy*, is at most not above two leagues.

At a less distance, more towards the North, we may discern likewise the source of the *Arve*, which flowing at first from three springs only, is very soon considerably increased by the torrents from those *Glaciers* I have just spoken of.

Two hours walk from *Prieuré* carried us out of the valley of *Chamouni*, at the opposite end to that by which we had entered. A road we ascended on our left, conducted us into the *Valorfine*, which on that side borders upon the country of *Vallais*. This valley which extends from South-west to North-east; may be about three

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three leagues in length, and less than a quarter of a league in its greatest breadth. From its broken ruinous appearance one would at first think it uninhabited; but farther on, we discover some few houses, and in the middle of it, on the left hand, is to be seen an opening, with the most beautiful fall of water imaginable.

To go to it we were obliged to quit the great road; and it is not till we come very near, that it appears in all its beauty. It is a considerable river that descends from the Glacier of *Buet*, and falls eight hundred yards from the ridge of a mountain which is almost entirely covered by the spouting sheet of water; this torrent magnificent and even terrible, far more grand and sublime than the cascade of *Terni**, pouring from a reservoir which

* The cascade of *Terni*, commonly called *Cascata del Marmore*, from the mountain it runs over, is in the duchy of *Spoleto*, near the city of *Terni*, and is formed by the river *Velino*. This river, after gliding
ing

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it has hollowed upon the mountain, rolls along its rocky channel, and bounding to the very bottom of the valley,

—magno cum murmure Montis

It Mare præruptum, et Pelago premit arva sonanti.

At

ing many miles with a gentle quiet course, reaches the steep declivity of its channel, which is shaded with thick trees of a perpetual verdure, as are likewise the surrounding mountains. The stream no sooner reaches this declivity, than it proceeds with such rapidity, that every wave seems animated in pressing forward to overtake that which is before it, till they rush at once with a tremendous noise down a steep rock, at least three hundred feet in height, and falling upon other rocks against which they dash and break, the waters rise again in mists, which hovering some time in the air, above the level of the cataract, and the neighbouring fields, descend in a continual drizzling rain upon the adjacent valley. After this they rush again tumultuously into the cavities of the mountain, and foaming, burst through several openings, when after rolling over some other precipices, they at last reach the bed of the river at the bottom.

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At the same time this fine water-fall is embellished by large trees, which shoot from the summit of the mountain into the clouds, and in its front, by lofty firs and rocks, so as altogether to form a picture the most delightful as well as extraordinary.

ARRIVED at the parish of *Valorfine*, we had the pleasure of meeting a Brigadier we had been acquainted with at *Chene*, who commanded a party of eleven men quartered at this pass to prevent the smugglers entering into *Savoy*. It was here we crossed the *Buetine*, commonly called the *Blackwater*, where the stone or boundary, is seen that separates the two States; and going on a little farther, entered soon into a very narrow defile, where there still remain some ruined fragments of a gate and tower, which formerly defended the entrance into this country. As we walked without a guide, every thing that surrounded us was
enough

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enough to alarm even the most intrepid mind ; we saw nothing in our route, but rapid torrents, naked rocks, or mountains entirely covered with lofty woods of fir-trees ; in short, there was not the least appearance of a country that could possibly be inhabited.

Not far distant however another valley opens, which though it has no plain, has notwithstanding some habitations, and a few pastures enclosed by large woods. It is commanded by a single parish, called *Epegnon*: This village, seated upon a green turf, almost at the top of a mountain, and upon a steep declivity which is crowned with pines, produces a very singular effect.

LEAVING this parish on our left, we ascended a mountain full as high as the *Voirons*: our road conducted us through beautiful woods, and over rocks of a blackish colour, but was so extremely
narrow,

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narrow, it is difficult to conceive, how a mule can possibly make its way through it, and the sky was almost always hidden from us. Two thirds of the way up this mountain, is a rock in the form of a chimney, one face of it indeed is wanting, but the obscurity of the place, and some large trees, supply the defect. In this road we could not but remark the prodigious height of the pines, of which many were from a hundred to a hundred and ten feet high. We observed several of these had no other foundation than the rock, from which they at first shoot out horizontally, and at the distance of half a foot from it turn up into the air. In examining how they could be nourished and supported, we found their roots to run between the joints, and clefts of the rocks, which were very numerous, and that they perfectly filled up every rift, and every vacuity in them; but the mold that is originally generated by the rotting of the liverwort, and other rock produc-

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tions

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tions of a similar kind, which is washed into these clefts, being perhaps the richest softest soil in nature ; and as the saplings must have continued to be moistened by the waters and salts which distil from these plants, till their roots were shot to a prodigious depth, it is not difficult to account for the abundant nourishment of them, and the cause of such an extraordinary vegetation.

ARRIVED near the summit of the mountain, we had the satisfaction of finding a plain smooth rock with several names engraved or written upon it, amongst which we discovered that of Mr. Professor *De Saussure*. The sight of these names revived our spirits; they afforded an ideal presence of the Writers, they were a proof that we were in the right road, and gave us hopes of being soon delivered from these gloomy forests;

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inclined us to believe, that we had only to continue strait forward beyond *Epegnon*. We were fully possessed of this idea, when across some trees, we discovered our road cut by a valley, which drawing towards the right hand appeared only like a broad deep ditch. It was here, that already harrassed by our long fatiguing walk, we again were not without our fears of the distance we had yet to go; more especially as we were without a guide, and could not perceive the least trace of habitation: add to this our being surrounded on every side by mountains covered with extended woods, so thick and dark, that they gave us no idea but of the retreat of the most savage animals, and that we were unacquainted with any certain path by which to extricate ourselves out of them.

WE did not however wholly lose the track that had conducted us thus far, it

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extended to the right, with this new opening; and the more our situation was alarming, the stronger were our efforts to get out of it. This valley which was terminated by an immense rampart of pines, might be near three leagues in length; believing therefore we must travel to the end of it, we doubled our pace; the fear of being benighted in those horrid forests, gave us wings, and in three quarters of an hour we at last discovered a small plain, which afforded hopes that we might soon arrive at habitations.

In fact it was not long before we distinguished several houses with a chapel: it proved to be the village of *Trient*; and here we learnt that it was still three long leagues farther, to *Martigny*, the town of *Vallais* where we were to lodge. Beyond this village is an opening between the mountains, by which we were to pass; we took the road to it which was
steep,

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steep, and it was three quarters of an hour before we could reach it.

BUT having gained at length this narrow straight, a landscape as delightful as it was unexpected, opened before us; judge Reader of our transport at the prospect of the *Pays de Vallais*, which from this point is so picturesquely striking, that all the labours and difficulties we had undergone seemed nothing to the pleasure we now felt. Two mountains covered with lofty fir-trees, and whose appearance was romantic, extended on our right and left, and closed behind us; at their base were fertile pastures; and in front, but far below us, at the bottom of the valley, the very first object which presented itself upon the plain, was the town and city of *Martigny*, somewhat more than two leagues distant. This valley runs forward from *Martigny* in a strait line for six or seven leagues in length, and a league in breadth; and is

divided through its whole extent by the *Rbone*. There are other streams besides, which winding with a mazy movement rather seem to be the work of Art, than that of Nature, the brilliancy of whose transparent waters, the trees, the meadows, the vineyards, the corn-fields, the great and cross roads, the villages, the towns, the splendid colouring of the mountains opposite to the sun, and the brown tints of those on the contrary side, with *Sion*, the capital of *Vallais*, discoverable in the distance, all these objects affected us in the most lively manner, and gave us jointly an idea of the richest country, or rather of the most beautiful and magnificent garden.

WE had yet two leagues to walk to *Martigny*, and several villages to pass upon the declivity of this straight : and in this road it was we saw for the first time, several persons with the swelled throat, of a prodigious size ; who have generally
a thick-

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a thickness and a faltering impediment in their speech. We asked one of these stag-necked men, how far it was to *Martigny*, but it was impossible to understand him, and we doubted whether he understood our question; we at last however arrived at this place an hour after sun set.

MARTIGNY is divided into two parts, the City, and the Borough: they are a quarter of a league distant from each other, and the Borough has more the appearance of a city than the very city itself; it is a long and spacious street; the church is large but has scarcely any paintings, and by its disposition and the simplicity of its ornaments, and of the organ which decorates it, one would take it for a Protestant church. The buildings of this city are not disagreeable; but though tolerably well inhabited, it has considerably declined, since it is no longer the

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residence of the Bishop and Prince of
Vallais.

WE were tempted to push on as far as *Sion*, but this excursion not being consistent with our plan, we were obliged to give it up; the next day then, we took the road to *St. Maurice*, following the course of the *Rhone* for the length of a valley of about four leagues, but incomparably less beautiful, less in breadth, and not so well peopled as that which I have described from *Martigny* to *Sion*: the road is nevertheless engaging, and it is in this route you see the celebrated fall of the *Blackwater*, which is not very delicately called here *Le Pisse Vache*. It precipitates down the mountain from the height of about eighty feet; but this fall which many people boast of, is not to be compared with that of the *Valorine*, or with that of *Nant d' Arpenaz*, in the valley of *Sallencbe*; when we see it near indeed, its sheet is broad, which together
with

with the fine mist which expands to some distance from it, constitutes its principal beauty. But what it has of singularity is, a very narrow passage across the gill of the mountain, over a few slender boards placed upon some projections of the rock; this sort of bridge is very dangerous, and useful only to the inhabitants of the *Valorsine* and *Epegnon*, who it seems pass by this strait into the heart of *Vallais*, which shortens their road considerably.

THERE is nothing more that is particular here, unless it be the situation of a tolerably handsome building as we approach *St. Maurice*; it is placed upon the shelf of a rock about half way up the side of the mountain, which seems as if it were cut down perpendicularly by art, and we learned it was a hermitage.

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THE avenues to *St. Maurice* * are charming. This city, famous for the martyrdom of the *Theban Legion*, is tolerably handsome; the houses are regularly built, and the streets in good order, neat, and clean. The women are remarked for the regularity of their shapes, the greater part of the young women have no other head dress than their hair, unless perhaps a little hat adorned with ribbands, and their difference of condition is to be distinguished only by the quality of the stuff their cloaths are made of, and not by their fashion, which is in all degrees alike. Those who are the most distinguished, wear a coloured petticoat, and
bodice

* *Mauritius*, from this place received its honorary name, is *said* to have commanded a Theban Legion, consisting of about six thousand men, in an expedition into Gaul, under Maximian, by whose order the whole body was cut to pieces, with their leader, for refusing to fight against their brethren the Christians.

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bodice of the same, with a fine muslin apron, and the richest of them adorn the bottom of their petticoat with two rows of ribbands of different colours, which is all their finery; this elegant manner of dressing has subsisted with them time out of mind: in short the city is well peopled, and has several churches. Being a frontier to the Canton of *Berne*, it guards the entrance of the lower *Vallais*, of which it is the capital; and its situation between two steep mountains and the *Rhone* that washes it, would render it in time of war, a post of great importance; though the castle of the Governor is but a very rude antique building, cased with brick: its stone bridge upon the *Rhone*, is firm and strong, and consists only of a single arch.

From this city you have the choice of two roads to *Geneva*, one through the States of *Berne* which is on the other side
of

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of the *Rhone*, and that which is upon the left, on this side of it. Having gone by both of them, I shall say something of each.

TAKING then the latter, you do not cross the river, but travel in a very agreeable route, where you are entertained with the astonishing contrast between the rugged mountains of *Savoy*, on one side, and the beautiful country under the government of *Berne*, on the other. This part of the lower *Vallais* that we pass over, still keeps its fertility; the lands are finely cultivated, you meet with many handsome villages, and pass by *Montbey*, a small city, whose situation is exceedingly agreeable. This road too is well beaten by the guards, whose care contributes to its safety, and relieves the mind of the traveller; such precaution here, as likewise that of defending all the cross roads under

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under rigorous punishments, has not long since been necessary ; it brings us in short to the head of our lake, and within a few hours to *St. Gingo*, the last village in the country of *Vallais*. From this village you pass by *Evian*, *Ripaille*, *Tbonon* ; which jointly with the prospect opposite to the lake, along which you coast, agreeably diversify this route ; and two days are sufficient for the whole journey.

THE other route by the province of *Berne*, though somewhat longer, is in many respects much preferable, whether we regard the beauty of the country, and the curiosities that we meet with in it, or the conveniency of being able to accomplish the journey either on horseback, in a carriage, or by water ; an advantage this not to be despised by harrassed weary travellers ; who after having sufficiently indulged their curiosity, are apt to grow impatient
of

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of fatigue and wish to be at home. This road then remains to be described.

HAVING crossed the bridge at *St. Maurice*, the traveller is instantly in the territories of the Canton of *Berne*; within an hundred paces of this bridge is a door like that of a barn, where guards are stationed to make the usual enquiries at going out of one government into another, and the Bear (the ensign of *Berne*) is painted up on the front of this gatehouse: as soon as we have passed it, the country opens to a considerable extent, and immediately its beauty, its fertility, the richness of its hills, and the number of its inhabitants, give the most favourable idea of the government of *Aigle*; the other side of the *Rhone*, as far as the lake of *Geneva*, makes, as I said before, part of *Vallais*.

WE were no more than three quarters of an hour in going from *St. Maurice* to *Bex*. This village, perhaps the finest in

Swit

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Switzerland, is well known for the salt-works in its neighbourhood, which are at the same time very large and ingeniously conducted, and afford many things well worthy the curiosity of a traveller. From *Bex* you go to *Aigle*, a pleasant town, situated at the foot of a fine fertile mountain, its inhabitants are men of spirit and gaiety, who live much at their ease; there are many clock and watch makers residing in it, but it is to be feared this manufacture is in a state of decline, owing to that taste for the pleasures of the country which most of the workmen fall into. The trade begins already to feel a kind of languor, and the disorder most probably will increase.

A FEW leagues beyond this city bring you to the head of the lake, and you soon reach *Villeneuve*, which is situated upon its banks. From this last town we came
to

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to *Vivay*, a delightful little place, from whence begin the beautiful vine-yards of *La Vaux*, which continue for the extent of near four leagues. In this conclusion of our walk, we often looked behind us, for a glimpse of those mountains we had visited, our eyes accustomed to the sight of such amazing heights, considered these which now surrounded us, as only hillocks. Mount *Jura* notwithstanding, as likewise the *Mole*, are distinguishable and support their dignity; but Mount *Blanc* is more than twice as high as the highest of these, computing only from the valley of *Chamouni*, and it appears so even at its base, which we had gone over*.

OUR return to *Geneva* was without any accident, we felt nothing of our fatigue,
and

* Mount *Blanc* 11180 French feet above the valley of *Chamouni*.

The *Mole* no more than 4562 French feet above the lake of *Geneva*.

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and the exercise we had taken kept us for a considerable time in such a degree of strength, as made us look upon an excursion of four or five leagues but as an airing, which gave us no more trouble than a walk of a single league would have done before we set out upon this most agreeable expedition.

Directions

D I R E C T I O N S

FOR THE

JOURNEY TO CHAMOUNI.

SETTING out from *Geneva* early in the morning (if on foot), before day-break, the traveller may dine at *Bonneville*, and lie at *Cluse*. This journey is rather too long in very hot weather; as it is a walk of about ten leagues.

THE second day the traveller may lie at *Sallenche*, which is not above five leagues from *Cluse*, but then four hours may be well employed in visiting the cavern of *Balme*, which I would by all means advise.

THE

THE third day brings to him *Prieuré* in the valley of *Chamouni*: This last walk is long, and very fatiguing, but it is not possible to shorten, or to render it easier.

FIRST EXCURSION

In the Valley of Chamouni.

IF the weather be fine, advantage should be taken of it, to ascend Mount *Breven*. This excursion will employ an entire day.

SECOND EXCURSION.

As the Glacier of *Pelerins* is interesting in many respects above the other Glaciers, the traveller may ascend it, setting out very early in the morning, and see the Glacier of *Bossons* in his return; or if he prefer it, he may ascend that of *Bossons* first, and go from thence to that of *Pelerins*: this he will find a very laborious day's walk.

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I SAY nothing of our walk along the *Needles*. The sight undoubtedly is very grand, but it must be dearly bought by those who are not exceeding good walkers; for which reason there are few persons to whom I would venture to recommend it.

THIRD EXCURSION.

To see the valley of ice of *Montanvert*, and advance into it, will take up a day, and the traveller must set out three hours before sun-rise, or otherwise he must ascend the mountain the day before, and lie there, as we did. Those who can be satisfied with a simple prospect of this valley, may take a view of it, and see the mass of ice at the source of the *Arveron*, in their descent, the same day.

Return

Return by the Pais de Vallais.

FROM *Chamouni* to *Martigny* is a day's journey. From *Martigny* the traveller may, if he passes by *Savoy*, lie at *St. Gingo*: or he may reach as far as *Evian*; but this must be with great fatigue. I say nothing of the route by *Switzerland*, as every person may in this respect consult his own inclination. It is almost needless for the traveller to burthen himself with provisions, but it will be absolutely necessary to provide a pair of Mountaineers thick shoes with nails, and to be warmly clothed, to fence against the cold of the Mountains.



Heights above the Level of the

MEDITERRANEAN SEA.

	French feet.	Eng. Yds.
L AKE of <i>Geneva</i> , at the lower passage		
of the <i>Rhone</i> - - - - -	1126	398
Lake of <i>Neufchatel</i> - - - - -	1287	456
Highest Point of the Needle of <i>Saleve</i>	4220	1488
Summit of <i>Canigou</i> - - - - -	8718	3088
Summit of <i>Dole</i> , the highest Mountain of <i>Jura</i> - - - - -	5082	1800
Summit of <i>Môle</i> - - - - -	5688	2014
Valley of <i>Chamouni</i> - - - - -	3166	1121
Ridge of <i>Breven</i> - - - - -	8326	2949
Valley of <i>Montanvert</i> - - - - -	5266	1865
Abbey of <i>Sixt</i> - - - - -	2250	797
<i>Granges des Communes</i> - - - - -	4995	1769
Highest Grange of <i>Fonds</i> - - - - -	4116	1458
Summit of <i>Grenier</i> - - - - -	7854	2782
Summit of <i>Grenairon</i> - - - - -	8352	2958
Plain de <i>Lechaud</i> - - - - -	6480	2295
Summit of <i>Buet</i> - - - - -	9360	3315
Mount <i>Blanc</i> - - - - -	14346	5081
Mount <i>Ætna</i> - - - - -	11294	4000

Heights

Heights above the Level of the OCEAN.

	French feet.	Eng. Yds.
H IGHEST Part of the <i>Table</i> , at the Cape of <i>Good Hope</i> - - - -	3255	1153
Top of <i>Snowdon</i> in <i>Wales</i> - - - -	3456	1224
Pike <i>Rucco</i> in the Island of <i>Madeira</i> -	4769	1689
Pike <i>Tenerife</i> - - - - -	12420	4399
The same Pike, according to the late Dr. <i>Heberden</i> of <i>Madeira</i> . - - - -	14490	5132
Summit of <i>Cotopaxi</i> , in the Province of <i>Quito</i> , according to <i>Don Antonio de Ulloa</i>	18756	6643

	French feet	Eng. Yds.
R IDGE of <i>Breven</i> from its Base in the Valley of <i>Chamouni</i> - - - -	5160	1828
Summit of Mount <i>Blanc</i> above the Valley of <i>Chamouni</i> - - - - -	11180	3960
Granges des <i>Communes</i> above the Abbey of <i>Sixt</i> - - - - -	2745	972
Summit of <i>Grenier</i> above the Abbey of <i>Sixt</i>	5604	1985
Summit of <i>Grenarion</i> above the Abbey of <i>Sixt</i> - - - - -	6102	2179
Icy Summit of <i>Buet</i> above the Abbey of <i>Sixt</i> - - - - -	7110	2518

THE END.

